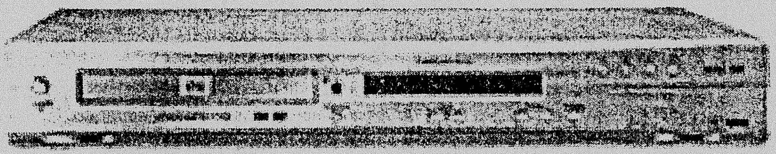
Profectis
Technischer Kundendienst
QUELLE.

Serviceunterlage

Produkt-Nr.:
725.977-3
Typ/Privileg-Nr.:
DVD R 3037

DVD-RECORDER

```
UTS-Nr.:          999         QUELLE
Best.Nr.:         7259773/01
Ger.Bez.:         DVD RECORDER

GKz:                 G   GERAET
WGT:               643   CD-VIDEO
Ditec Produktgruppe: 2   VIDEO
Klassierung:      DVD.  DVD-PLAYER
Type/Privileg/Universum.Nr DVD R 3037
Herstellertyp              DW 8020
Beschreibung               DVD R 3037
VK-Preis: 799.95

Serviceart:             03  REGIONALE-REP.STELLE
Garantie fuer Kunden    24 Monate
Sondervereinbarungen:    0  SIEHE SERVICEART

Garantiereparatur      0283264  PROFECTIS GMBH DVD-VIDEO-POOL-
Sondervereinbarungen:        0  SIEHE SERVICEART

--------------------------------------------------------------------------------
Katalog                                      Seite
  Erst  035 SONDERKATALOGE H/W 2003           0000
  Letzt 035 SONDERKATALOGE H/W 2003           0000

--------------------------------------------------------------------------------
Geraete Info:

--------------------------------------------------------------------------------
Technische Daten:
  AUFNAHME-FORMAT:       DVD+R/+RW
  WIEDERGABE-FORMAT:  ALLE, nicht DVD-AUDIO
  5 AUFNAHME-MODI, BIS 6 STD AUFNAHME

--------------------------------------------------------------------------------
Fehler:

--------------------------------------------------------------------------------
```



Profectis GmbH Technischer Kundendienst
Kundendienstzentralleitung Duisburger Str. 57, 90451 Nürnberg
Bei allen Reparaturen sind die gültigen Sicherheitsvorschriften zu beachten!

Nachdruck nicht gestattet
Änderungen vorbehalten

Nov 2003

DVD recorder

Service

Service

Sercive

Service Manual

TABLE OF CONTENTS

Technical specifications 1
Safty & Warning. 2
General information 3-4
Block diagram 5
Main board 6
  Schematic diagram 6-1
  Layout 6-2
  Part list 6-3
AV board 7
  Schematic diagram 7-1
  Layout 7-2
  Part list 7-3
DV board 8
  Schematic diagram 8-1
  Layout 8-2
  Part list 8-3
control board 9
  Schematic diagram 9-1
  Layout 9-2
  Part list 9-3
Power board 10
  Schematic diagram and layout 10-1
  Part list 10-2
Unit explode 11
Packing explode 12

Specifications

DVD section

Laser type	Semiconductor laser, Wavelength 650 nm
Signal system	PAL625/50,NTSC525/60
Video output level	1 Vp-p (75 ohm)
Video Y output level	1 Vp-p (75 ohm)
Video C output level	286 mVp-p (75 ohm)
Audio frequency response	DVD (PCM)20 Hz - 22 kHz (+/-1.0 dB)
	CD 20 Hz - 20 kHz (+/-1.0dB)
Digital output	Coaxial & Optical

Video signal	
Horizontal resolution:	480lines
S/N ration:	60dB
Audio singal	
Audio frequency response	DVD (PCM)20 Hz - 22 kHz (+/-1.0 dB)
	CD 20 Hz - 20 kHz (+/-1.0dB)
S/N ratio	80dB
Dynamic range:	DVD(PCM): 85dB
	CD:85dB
Audio L/R :	2Vrms 1 Kilo Ohm
Distortion	0.01%

General

Power supply	230V/ 50 Hz
Power consumption	28 W
Dimension	W430 x H52 x D310 mm
Net Weight	4.2 kg

CAUTION

"VENTILATION SHOULD NOT BE IMPEDED BY COVERING THE VENTILATION OPENINGS WITH ITEMS, SUCH AS NEWSPAPER, TABLE-CLOTHS, CURTAINS, ETC."

"NO NAKED FLAME SOURCES, SUCH AS LIGHTED CANDLES, SHOULD BE PLACED ON THE APPARATUS."

"THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THEAPPARATUS."

"THE MAINS PLUG IS USED AS THE DISCONNECT DEVICE AND

SHALL BE REMAIN READILY OPERABLE."

General Information

Features

- DVD player Dolby Digital^{*2} decorder, supporting Dolby Pro Logic and Virtual Surround.
- 2-channel audio out
- TV tuner receiver.
- Conforming DVD, SVCD, VCD1.1, VCD2.0, MP3, ,CDR, CDRW discs.
- DVD navigation and SVCD, VCD 2.0 PBC controlling functions.
- VFD front panel display and OSD menu display.
- Full function remote control.

DVD region code

DVD players and discs are designed with region numbers which dictate the region (printed on the rear panel). If the region number does not match the region number in your DVD player, you will not be able to play the disc. If you try to play the DVD, the message WRONG REGION NUMBER will appear on OSD.

The region number for this DVD player is 2.

Disc can be playbacked

- DVDs
  Disc are general recorded with multi-titles. Titles may be subdivided into chapters.
- Video CDs
  Disc are general divided into tracks.
- Audio CDs and MP3
  Disc are divided into tracks.

Note

- You cannot play CD-G, CD-EXTRA, , CD-ROM and DVD-ROM discs.

DISCS can be recorded

DVD+RW/R

Glossary of disc terms

- Title (DVD)
  The longest sections of a picture or a music piece on a DVD; a movie, ect., for a picture piece on a video software; or an album, etc., for a music piece on and audio software. Each title is assigned a title number enabling you to locate the title you want.
- Chapter (DVD)
  Sections of a picture or a music piece that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want. Depending on the disc, no chapters may be recorded.
- Track (Video or audio CD)
  Sections of a picture or a music piece on a VIDEO or a CD. Each track is assigned a track number enabling you to locate the track you want.

CAUTION

"VENTILATION SHOULD NOT BE IMPEDED BY COVERING THE VENTILATION OPENINGS WITH ITEMS, SUCH AS NEWSPAPER, TABLE-CLOTHS, CURTAINS, ETC."

"NO NAKED FLAME SOURCES, SUCH AS LIGHTED CANDLES, SHOULD BE PLACED ON THE APPARATUS."

"THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THEAPPARATUS."

"THE MAINS PLUG IS USED AS THE DISCONNECT DEVICE AND

SHALL BE REMAIN READILY OPERABLE."

General Information

Features

- DVD player Dolby Digital^{*2} decorder, supporting Dolby Pro Logic and Virtual Surround.
- 2-channel audio out
- TV tuner receiver.
- Conforming DVD, SVCD, VCD1.1, VCD2.0, MP3, ,CDR, CDRW discs.
- DVD navigation and SVCD, VCD 2.0 PBC controlling functions.
- VFD front panel display and OSD menu display.
- Full function remote control.

DVD region code

DVD players and discs are designed with region numbers which dictate the region (printed on the rear panel). If the region number does not match the region number in your DVD player, you will not be able to play the disc. If you try to play the DVD, the message WRONG REGION NUMBER will appear on OSD.

The region number for this DVD player is **2**.

Disc can be playbacked

- DVDs
  Disc are general recorded with multi-titles. Titles may be subdivided into chapters.
- Video CDs
  Disc are general divided into tracks.
- Audio CDs and MP3
  Disc are divided into tracks.

Note

- You cannot play CD-G, CD-EXTRA, , CD-ROM and DVD-ROM discs.

DISCS can be recorded

DVD+RW/R

Glossary of disc terms

- Title (DVD)
  The longest sections of a picture or a music piece on a DVD; a movie, ect., for a picture piece on a video software; or an album, etc., for a music piece on and audio software. Each title is assigned a title number enabling you to locate the title you want.
- Chapter (DVD)
  Sections of a picture or a music piece that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want. Depending on the disc, no chapters may be recorded.
- Track (Video or audio CD)
  Sections of a picture or a music piece on a VIDEO or a CD. Each track is assigned a track number enabling you to locate the track you want.

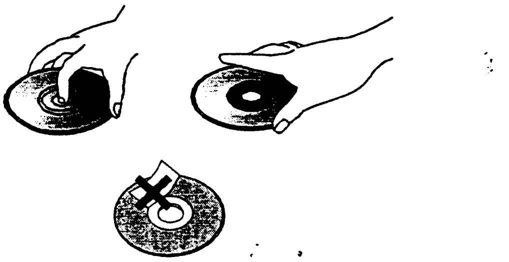
General Information (Continued)

Notes on disc

Disc handling precautions

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.

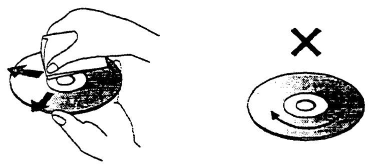
If there is glue (or a similar substance) on the disc, remove the glue completely before using the disc.



- Do not expose the disc to direct sunlight or sources such as hot air ducts, or leave it in a car parked in direct sunlight as there can be considerable rise in temperature inside the car.
- After playing, store the disc in its case.
- Do not write on the label side with a ball-point pen or other writing utensils.
- Be careful not to drop or bend the disc.

Disc cleaning precautions

- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.



- Do not use solvents such as benzine, thinner, commerically avaiable cleaners or anti-static spray intended for viny1 LPs.

Disc installing precautions

- Do not install more than 1 disc on disc tray.
- Do not place the disc on the tray up-side down.
- Do not try to close the disc tray when the disc is not installed properly.

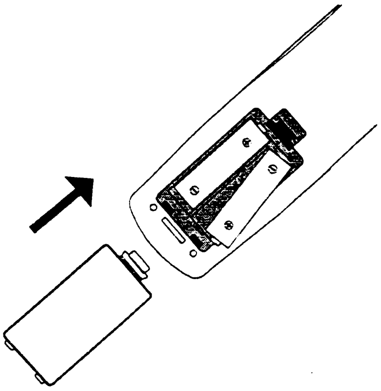
Accessory

Check that you have the following items:

- RF antenna cable(1)
- RCA cable(RCAx1 pair)
- Remote control (1)
- AA batteries (2)
- Scart cable(x1 for scart version only)
- IB(x1)
- Warranty card(x1)

Inserting Batteries into the Remote Control

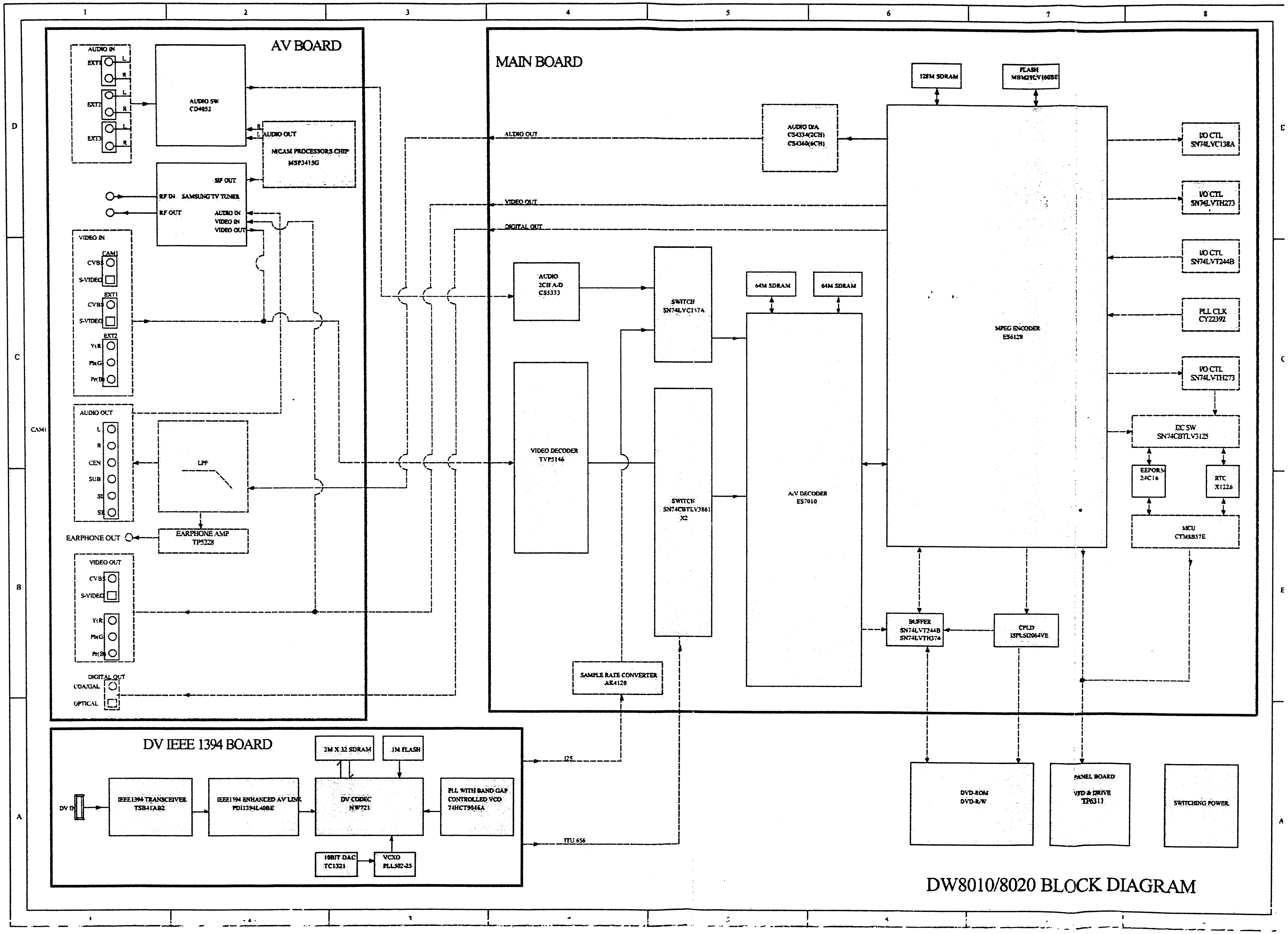
You can control the system using the supplied remote. Insert two batteries by matching the + and - on the batteries. When using the remote, point it at the remote sensor on the front panel of this system.



Note

- Do not leave the remote in an extermely hot or humid place.
- Do not use a new battery with an old one.
- Do not drop any foreign object into the remote casing. particularly when replacing the batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so many cause a malfunction.
- If you will not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

BLOCK DIAGRAM


1
2
3
4
5
6
7
8
D
C
B
A
CAM1
AV BOARD
AUDIO IN
EXT1
EXT2
EXT3
L
R
AUDIO SW
CD4052
AUDIO OUT
NICAM PROCESSORS CHIP
MSP3415G
SIF OUT
RF IN
SAMSUNG TV TUNER
RF OUT
AUDIO IN
VIDEO IN
VIDEO OUT
VIDEO IN
CAM1
CVBS
S-VIDEO
EXT1
CVBS
S-VIDEO
EXT2
Y(R)
Pb(G)
Pr(B)
AUDIO OUT
L
R
CEN
SUB
SL
SR
LPF
EARPHONE OUT
EARPHONE AMP
TP5228
VIDEO OUT
CVBS
S-VIDEO
Y(R)
Pb(G)
Pr(B)
DIGITAL OUT
COAXIAL
OPTICAL
MAIN BOARD
AUDIO OUT
VIDEO OUT
DIGITAL OUT
AUDIO D/A
CS4334(2CH)
CS4360(6CH)
128M SDRAM
FLASH
MBM29LV160BE
I/O CTL
SN74LVC138A
I/O CTL
SN74LVTH273
I/O CTL
SN74LVT244B
PLL CLK
CY22392
I/O CTL
SN74LVTH273
I2C SW
SN74CBTLV3125
EEPORM
24C16
RTC
X1226
MCU
CTM8B57E
AUDIO
2CH A/D
CS5333
SWITCH
SN74LVC157A
64M SDRAM
64M SDRAM
MPEG ENCODER
ES6128
VIDEO DECODER
TVP5146
SWITCH
SN74CBTLV3861
X2
A/V DECODER
ES7010
BUFFER
SN74LVT244B
SN74LVTH374
CPLD
ISPLSI2064VE
SAMPLE RATE CONVERTER
AK4120
DV IEEE 1394 BOARD
2M X 32 SDRAM
1M FLASH
DV IN
IEEE1394 TRANSCEIVER
TSB41AB2
IEEE1394 ENHANCED AV LINK
PDI1394L40BE
DV CODEC
NW721
PLL WITH BAND GAP
CONTROLLED VCO
74HCT9046A
16BIT DAC
TC1321
VCXO
PLL502-25
I2S
ITU 656
DVD-ROM
DVD-R/W
PANEL BOARD
VFD & DRIVE
TP6311
SWITCHING POWER
DW8010/8020 BLOCK DIAGRAM

MAIN BOARD

TABLE OF CONTENTS

Circuit diagram 5-1
Component layout 5-2
Partlist 5-3

AV BOARD

TABLE OF CONTENTS

Circuit diagram 6-1
Component layout 6-2
Partlist 6-3

DV BOARD

TABLE OF CONTENTS

Circuit diagram 7-1
Component layout 7-2
Partlist 7-3

CONTROL BOARD

TABLE OF CONTENTS

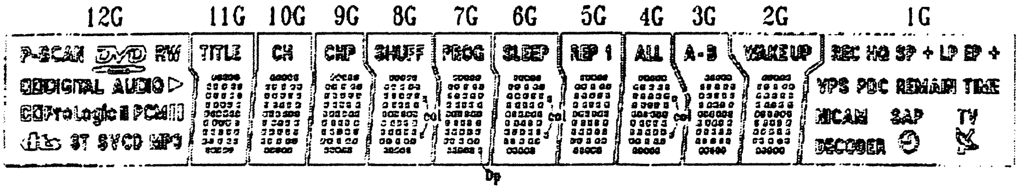
VFD feature 8-1
Circuit diagram 8-2
Component layot 8-3
Partlist 8-4

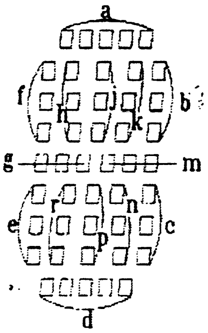
POWER BOARD

TABLE OF CONTENTS

Circuit diagram 9-1
Component layot 9-2
Partlist 9-3

GRID ASSIGNMENT


12G
11G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
P-SCAN DVD RW
DIGITAL AUDIO ▷
Pro Logic II PCM
dts ST SVCD MP3
TITLE
CH
CHP
SHUFF
PROG
SLEEP
REP 1
ALL
A-B
WAKE UP
REC HQ SP + LP EP +
VPS PDC REMAIN TIME
NICAM SAP TV
DECODER
col
col
col
Dp


a
f
b
h
j
k
g
m
r
n
e
c
p
d

(2G-11G)

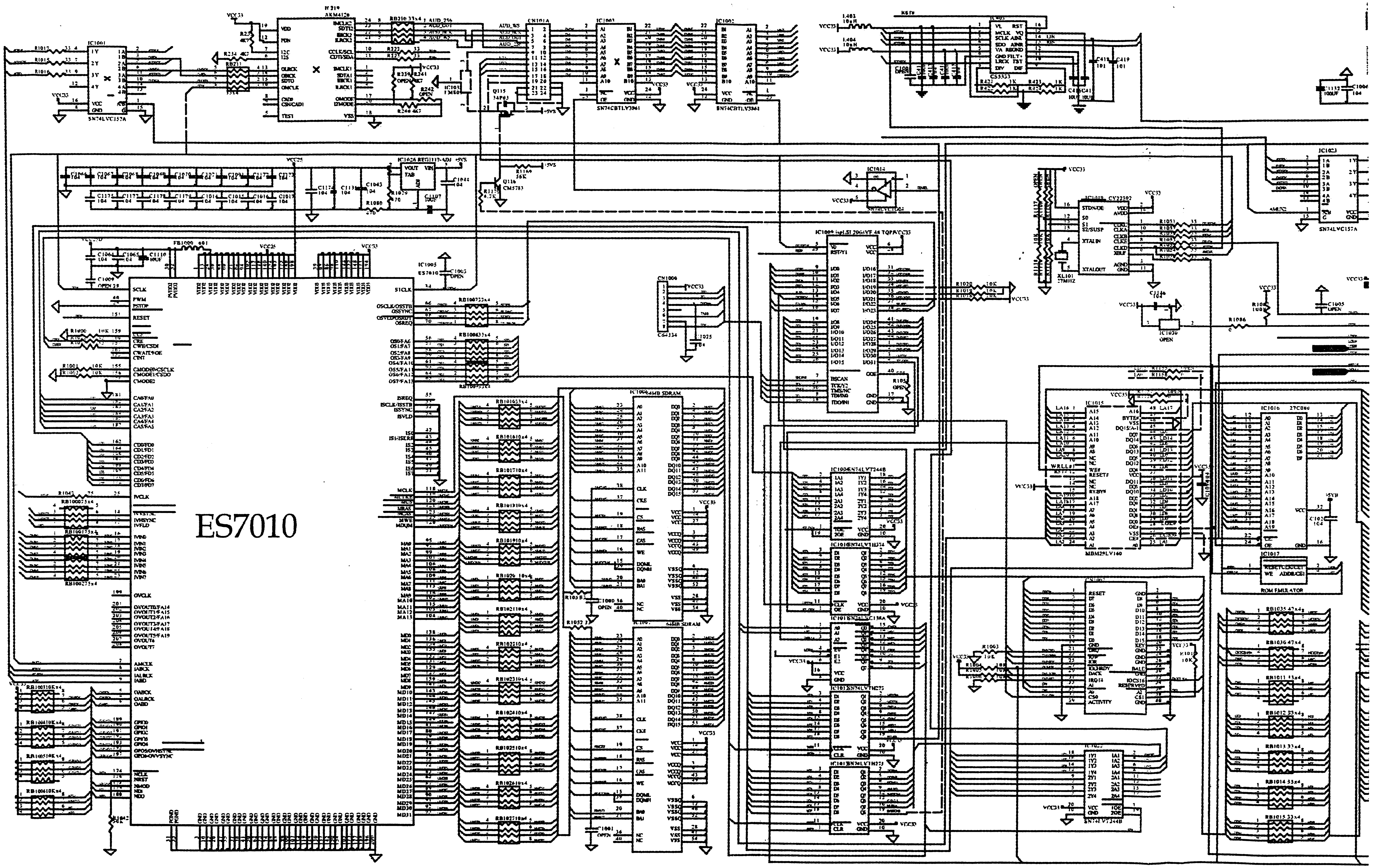
MODEL : HNV-12SM62
GRID ASSIGNMENT
Rev. ④ 19-Jun-2003

ANODE CONNECTION

	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	P-SCAN	TITLE	CH	CHP	SHUFF	PROG	SLEEP	REP	ALL	A	WAKE UP	REC
P2	DIGITAL				col	Dp	col	1	col	-B		HQ
P3	Prologic	a	a	a	a	a	a	a	a	a	a	SP
P4	I (left)	b	b	b	b	b	b	b	b	b	b	+ (left)
P5	PCM	f	f	f	f	f	f	f	f	f	f	LP
P6	II (right)	h	h	h	h	h	h	h	h	h	h	EP
P7	dts	j	j	j	j	j	j	j	j	j	j	+ (right)
P8	ST	k	k	k	k	k	k	k	k	k	k	VPS
P9	DVD	g	g	g	g	g	g	g	g	g	g	PDC
P10	RW	m	m	m	m	m	m	m	m	m	m	REMAIN TIME
P11	▷	c	c	c	c	c	c	c	c	c	c	⏲
P12	S	e	e	e	e	e	e	e	e	e	e	NICAM
P13	V	r	r	r	r	r	r	r	r	r	r	SAP
P14	CD	p	p	p	p	p	p	p	p	p	p	DECODER
P15	AUDIO	n	n	n	n	n	n	n	n	n	n	📡
P16	MP3	d	d	d	d	d	d	d	d	d	d	TV

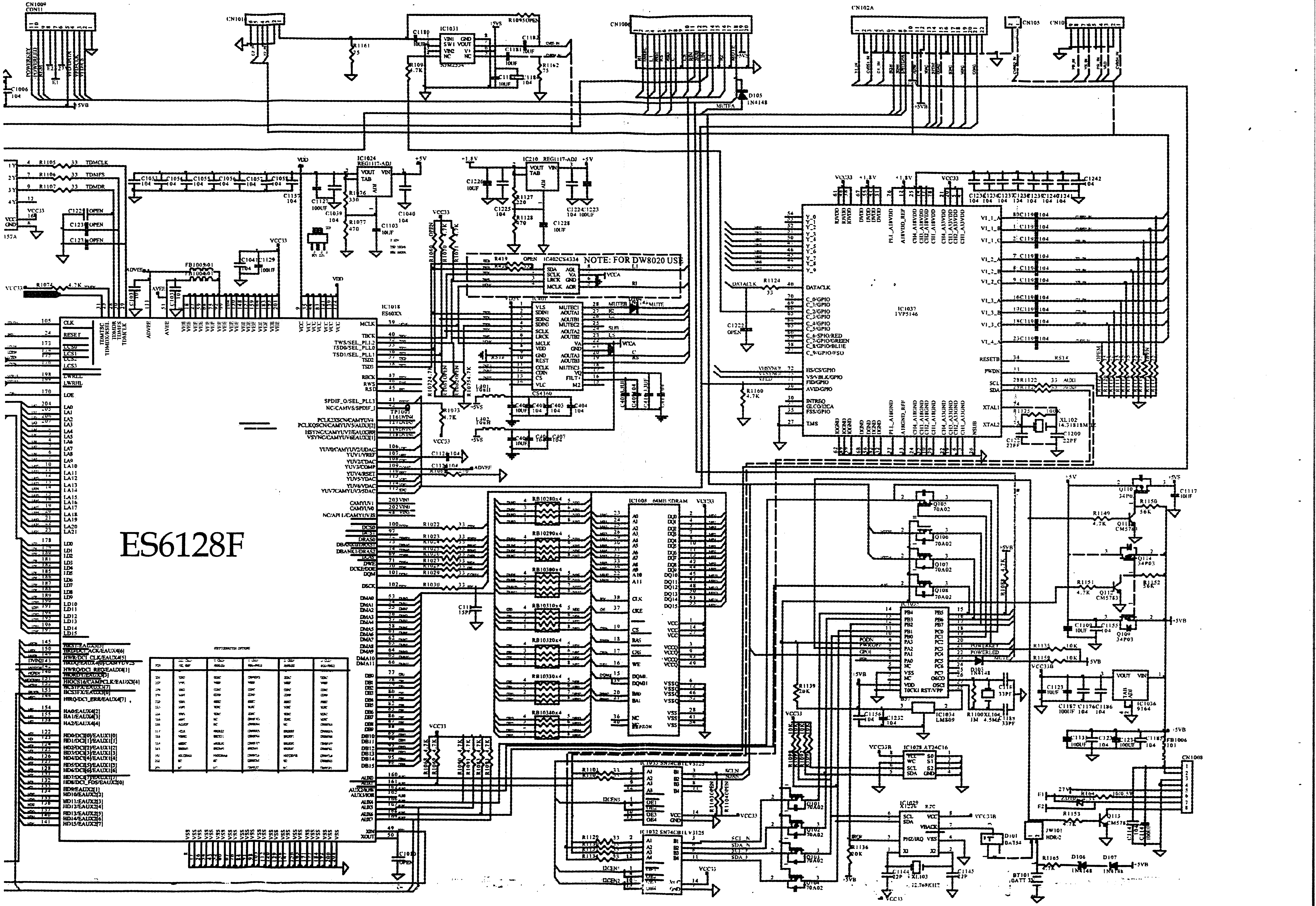
MODEL : HNV-12SM62
ANODE CONNECTION
Rev. ③ 18-Jun-2003

MAIN PCB SCHEMATIC DIAGRAM (LEFT PART)



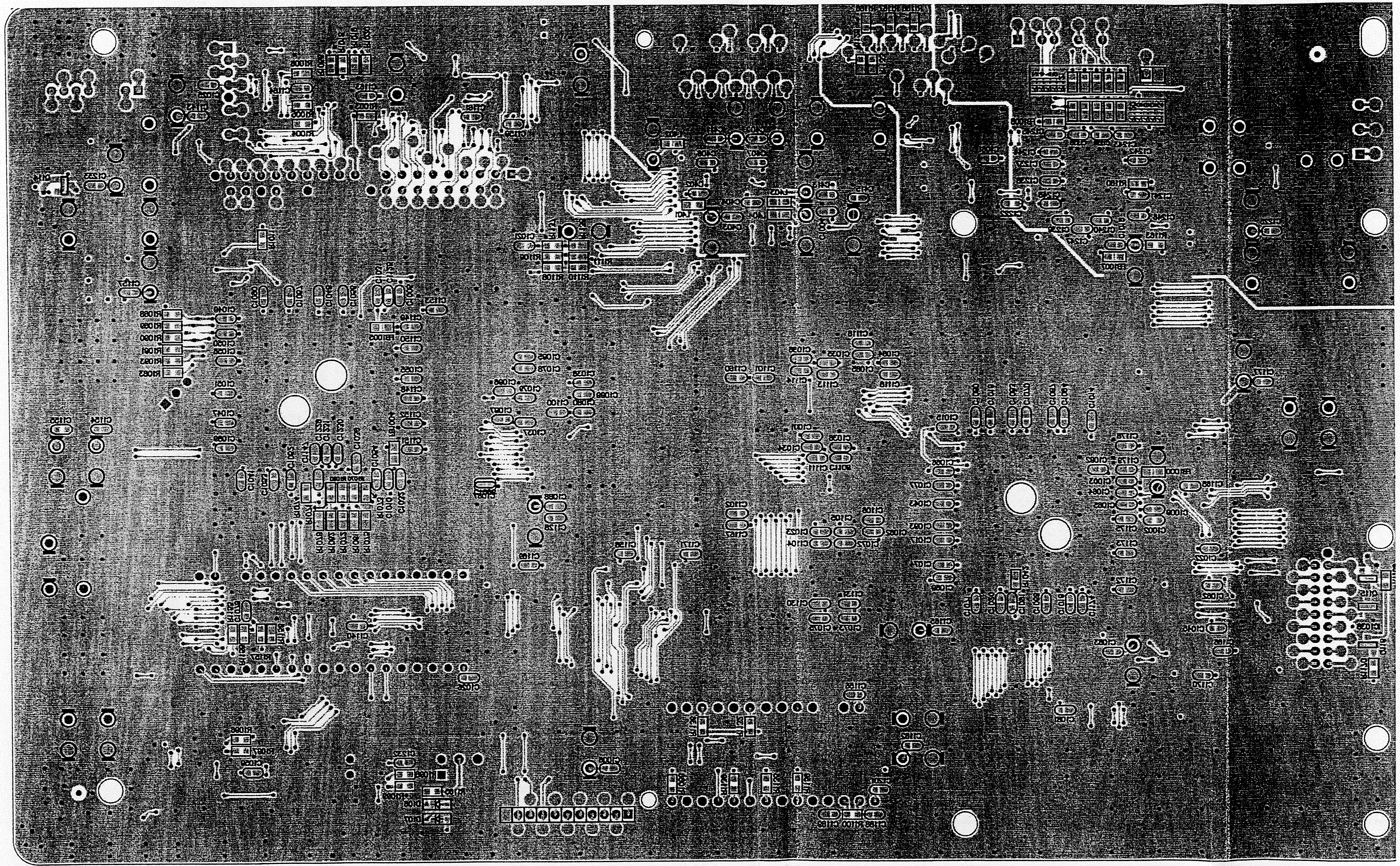
ES7010
IC1001
SN74LVC157A
IC1003
SN74CBTLV3861
IC1002
SN74CBTLV3861
AKM4120
CN101A
IC1026 REG1117-ADJ
IC1005
IC1004 64MB SDRAM
64MB SDRAM
IC1009 ispLSI 2064VE 44 TQFP/VCC33
IC1006 SN74LVT244B
SN74LVT244B
SN74LVC157A
IC1023
IC1019 CY22392
XL101 27MHZ
IC1015
MBM29LV160
IC1016 27C080
IC1017
ROM EMULATOR
CN1004
CS4334
CS5333
IC1030
OPEN
VCC33
+5VS
+5VB

MAIN PCB SCHEMATIC DIAGRAM (RIGHT PART)

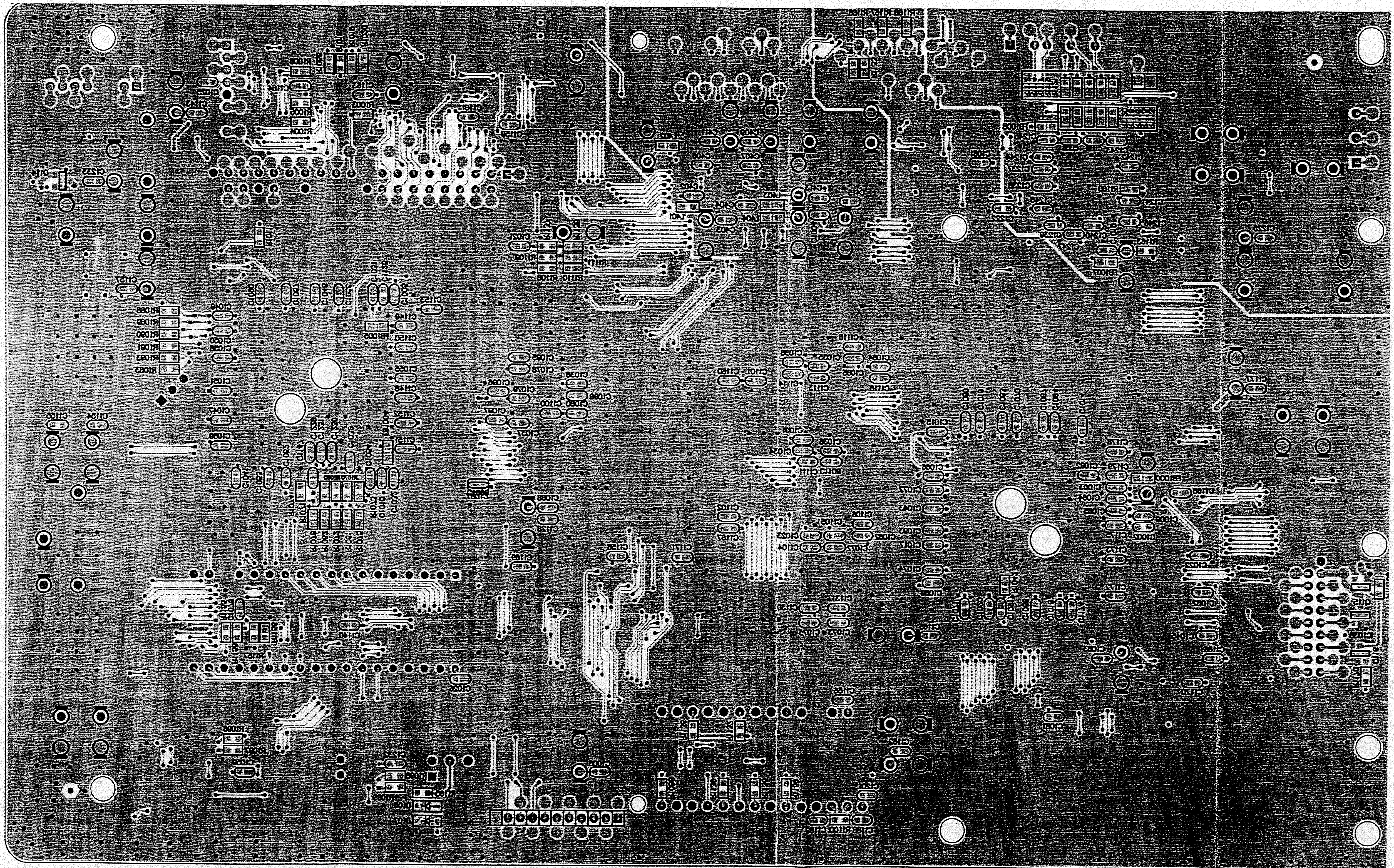


CN1009
CN1010
CN1006
CN102A
CN105
IC1031
NJM2534
IC1024 REG1117-ADJ
IC210 REG1117-ADJ
NOTE: FOR DW8020 USE
IC402 CS4334
IC407 CS4360
IC1018 ES60XX
ES6128F
IC1037 TVP5146
IC1008 64MB SDRAM
RB1028
RB1029
RB1030
RB1031
RB1032
RB1033
RB1034
IC1033 SN74CBTLV3125
IC1032 SN74CBTLV3125
IC1028 AT24C16
IC1029
IC1034 LM809
IC1036 9164
D105 1N4148
D101 DAT54
D106 1N4148
D107 1N4148
JW101 HDR-2
BT101 BATT 3V
XL102 14.31818MHz
XL103 32.768KHz
Q105 70A02
Q106 70A02
Q107 70A02
Q108 70A02
Q101 70A02
Q102 70A02
Q103 70A02
Q104 70A02
Q110 34P03
Q111 CM5783
Q112 CM5783
Q113 CM5783
Q114 34P03
Q109 34P03
CN1008
FB1006
MUTEA
+5V
+5VB
+1.8V
VCC33
VDD

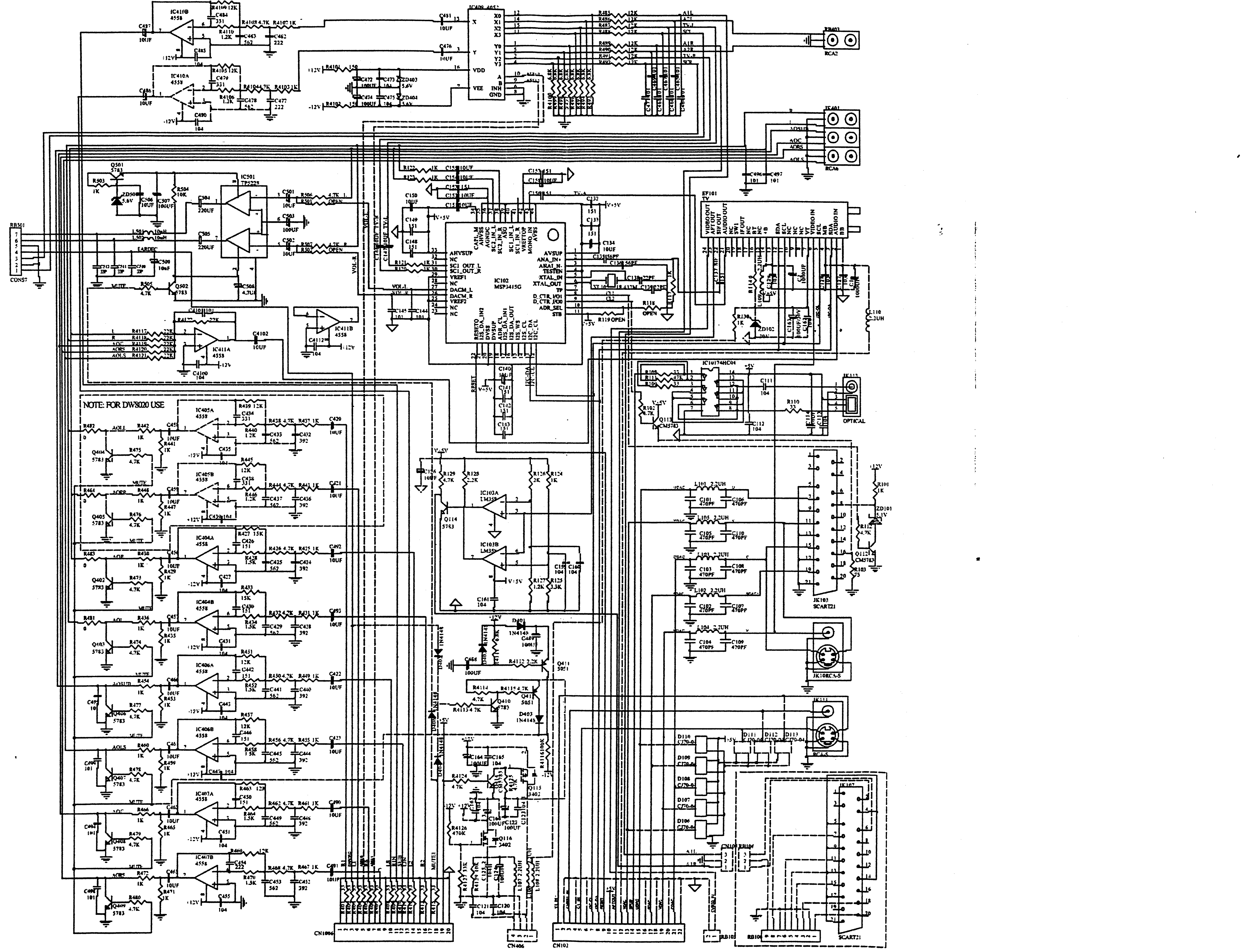
MAIN PCB BOTTOM LAYER



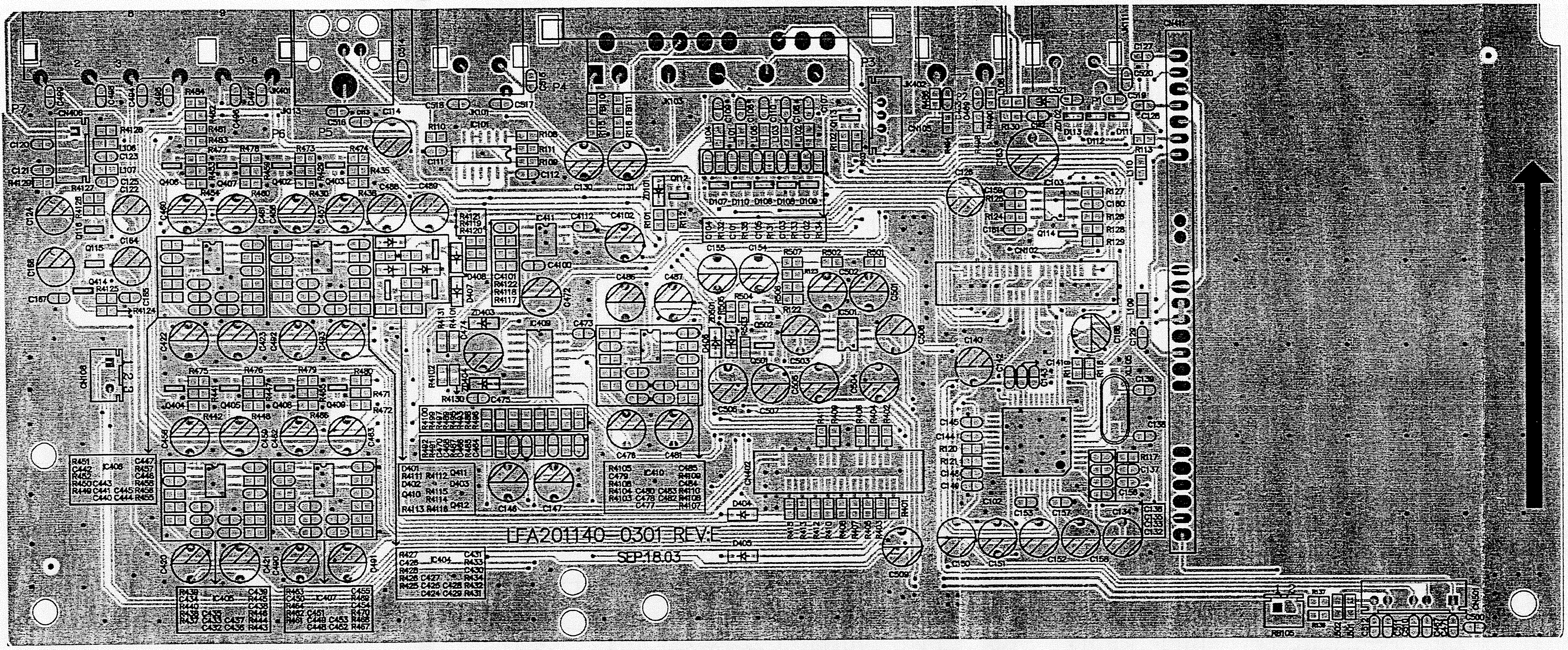
MAIN PCB BOTTOM LAYER



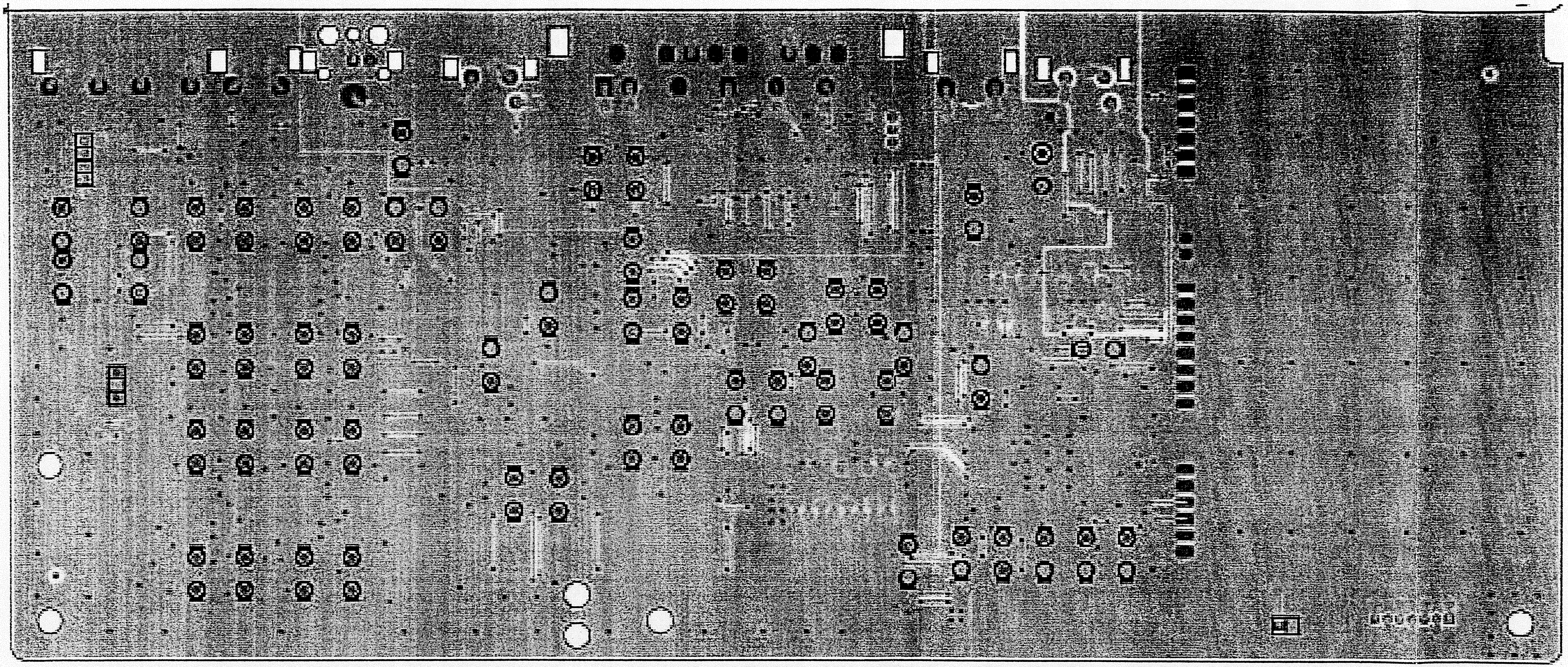
AV PCB SCHEMATIC DIAGRAM


IC409 4052
IC410B 4558
IC410A 4558
IC501 TP5228
IC102 MSP3415G
IC103A LM358
IC103B LM358
IC101 74HC04
IC411A 4558
IC411B 4558
IC405A 4558
IC405B 4558
IC404A 4558
IC404B 4558
IC406A 4558
IC406B 4558
IC407A 4558
IC407B 4558
NOTE: FOR DW8020 USE
RB403
RCA2
JK401
RCA6
EF101
JK112
OPTICAL
JK103
SCART21
JK10RCA-S
JK111
RCA-S
JK107
SCART21
RB501
CONS7
CN1006
CN406
CN102
RB102
RB104
CN103
Q501 5783
Q502 5783
ZD501 5.6V
Q114 5783
Q113 CM5783
Q112 CM5783
Q411 5051
Q410 5783
Q115 3402
Q116 3402
D401 1N4148
D403 1N4148
ZD101 5.1V
ZD403 5.6V
ZD404 5.6V
EARDEC
MUTE
AOLS
AORS
AOC
AOSUB
AOL
AOR
L
R
X TAL 18.432M
+12V
-12V
V+5V

AV IN PCB TOP LAYER


LFA201140-0301 REV:E
SEP.18.03
C146
C147
C476
C481
R4105
IC410
C485
C479
R4109
R4106
C484
R4104
C480
C483
R4110
R4103
C478
C482
R4108
C477
R4107
D404
D405
CN402
C431
R433
C430
R434
R432
R431

AV IN PCB BOTTOM LAYER



ELECTRICAL PARTS LIST AV IN BOARD

MISCELLANEOUS

CN108	CCN200000-0103	CONNECTOR 3 PIN PITCH=2.0mm
CN406	CCN200000-0104	CONNECTOR 4 PIN PITCH=2.0mm
CN501	CCN200000-0107	CONNECTOR 7 PIN PITCH=2.0mm
CN402	CHC200040-0820	CHIP HOUSE 2x10P P2xW3.8xH5.2mm
CN102	CHC200040-0822	CHIP HOUSE 2x11P P2xW3.8xH5.2mm
JK111	CJC010004-3030	RCA+DIN JK 1RCA+4P DIN YEL W/GND
JK101	CJC010004-3030	RCA+DIN JK 1RCA+4P DIN YEL W/GND
JK113	CJR001601-0020	RCA JACK 1P ORANGE W/GND
JK402	CJR002601-0010	RCA JACK 2P WHT-RED STAND
JK401	CJR002601-0010	RCA JACK 2P WHT-RED STAND
P3 P4	CSL207035-1602	SOLDER LUG OD7.0xID3.5xT0.3 mm
JK103	CSS021001-1040	SCART SOCK 21PIN PITCH=3.81mm
XL105	JCQ113000-1861	CRYSTAL 18.432MHZ HC-49US

CAPACITORS

C507	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C503	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C474	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C472	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C168	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C166	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C164	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C126	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C124	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C122	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C504	PRE039540-2210	COND ELECT 220 uF 16 V 20%
C505	PRE039540-2210	COND ELECT 220 uF 16 V 20%
C509	PRE039570-1000	COND ELECT 10 uF 50V 20%
C4102	PRE039570-1000	COND ELECT 10 uF 50V 20%
C506	PRE039570-1000	COND ELECT 10 uF 50V 20%
C502	PRE039570-1000	COND ELECT 10 uF 50V 20%
C501	PRE039570-1000	COND ELECT 10 uF 50V 20%
C487	PRE039570-1000	COND ELECT 10 uF 50V 20%
C486	PRE039570-1000	COND ELECT 10 uF 50V 20%
C481	PRE039570-1000	COND ELECT 10 uF 50V 20%
C476	PRE039570-1000	COND ELECT 10 uF 50V 20%
C459	PRE039570-1000	COND ELECT 10 uF 50V 20%
C458	PRE039570-1000	COND ELECT 10 uF 50V 20%
C421	PRE039570-1000	COND ELECT 10 uF 50V 20%
C420	PRE039570-1000	COND ELECT 10 uF 50V 20%
C158	PRE039570-1000	COND ELECT 10 uF 50V 20%
C155	PRE039570-1000	COND ELECT 10 uF 50V 20%
C154	PRE039570-1000	COND ELECT 10 uF 50V 20%
C151	PRE039570-1000	COND ELECT 10 uF 50V 20%
C150	PRE039570-1000	COND ELECT 10 uF 50V 20%
C147	PRE039570-1000	COND ELECT 10 uF 50V 20%
C146	PRE039570-1000	COND ELECT 10 uF 50V 20%
C140	PRE039570-1000	COND ELECT 10 uF 50V 20%
C134	PRE039570-1000	COND ELECT 10 uF 50V 20%
C131	PRE039570-1000	COND ELECT 10 uF 50V 20%
C130	PRE039570-1000	COND ELECT 10 uF 50V 20%
C114	PRE039570-1000	COND ELECT 10 uF 50V 20%
C163	PRE039570-1010	COND ELECT 100uF 50V 20%
C152	PRE039570-3390	COND ELECT 3.3 uF 50V 20%
C508	PRE039570-4790	COND ELECT 4.7 uF 50V 20%
C4101	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C471	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C470	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C468	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C467	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C466	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C464	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C137	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C514	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C515	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C516	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C517	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C518	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C519	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C520	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C521	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C143	PXL410370-1510	CHIP CAP 150pF 50V 5%
C139	PXL410370-2000	CHIP CAP 20 pF 50V 5%
C138	PXL410370-2000	CHIP CAP 20 pF 50V 5%
C141	PXL410370-2210	CHIP CAP 220 pF 50V 5%
C512	PXL410370-3300	CHIP CAP 33 pF 50V 5%
C511	PXL410370-3300	CHIP CAP 33 pF 50V 5%
C510	PXL410370-3300	CHIP CAP 33 pF 50V 5%
C438	PXL410370-3310	CHIP CAP 330 pF 50V 5%
C434	PXL410370-3310	CHIP CAP 330 pF 50V 5%
C479	PXL410370-3310	CHIP CAP 330 pF 50V 5%
C484	PXL410370-3310	CHIP CAP 330 pF 50V 5%
C135	PXL410370-5600	CHIP CAP 56 pF 50V 5%
C156	PXL439540-3340	CHIP CAP 0.33uF 16V 20%
C4112	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C4100	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C485	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C480	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C475	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C473	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C439	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C435	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C431	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C167	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C165	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C162	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C161	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C160	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C159	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C157	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C153	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C136	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C125	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C123	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C121	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C120	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C113	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C112	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C111	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C145	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C144	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C496	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C497	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C465	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C469	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C129	PXL456470-1030	CHIP CAP 0.01 uF 50V 10%
C148	PXL456470-1520	CHIP CAP 0.0015 uF 50V 10%
C142	PXL456470-1520	CHIP CAP 0.0015 uF 50V 10%
C133	PXL456470-1520	CHIP CAP 0.0015 uF 50V 10%
C477	PXL456470-2220	CHIP CAP 0.0022 uF 50V 10%
C482	PXL456470-2220	CHIP CAP 0.0022 uF 50V 10%
C432	PXL456470-3920	CHIP CAP 0.0039 uF 50V 10%
C436	PXL456470-3920	CHIP CAP 0.0039 uF 50V 10%
C149	PXL456470-4710	CHIP CAP 470 pF 50V 10%
C132	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C110	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C109	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C108	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C107	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C106	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C105	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C104	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C103	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C102	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C101	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C433	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C437	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C478	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%
C483	PXL456470-5620	CHIP CAP 0.0056 uF 50V 10%

RESISTORS

R113	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
C500	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R482	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R484	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R4107	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R4103	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R503	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R476	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R475	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R448	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R443	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R442	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R437	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R130	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R123	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R122	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R121	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R120	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R117	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R116	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R115	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R111	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R101	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R504	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R124	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R4128	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R4129	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R127	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%
R439	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%
R445	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%
R485	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%
R486	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%
R487	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%
R488	QCF165030-1230	CHIP RES. 12K OHM 1/16 W 5%

DIODE

D404	RCD114148-0011	DIODE CHIP BAV16W/IN4148W
D405	RCD114148-0011	DIODE CHIP BAV16W/IN4148W
D406	RCD114148-0011	DIODE CHIP BAV16W/IN4148W
D403	RCD114148-0011	DIODE CHIP BAV16W/IN4148W
D111	RCD170004-0010	DIODE CHIP CS70-04 SOT23
D110	RCD170004-0010	DIODE CHIP CS70-04 SOT23
D109	RCD170004-0010	DIODE CHIP CS70-04 SOT23
D108	RCD170004-0010	DIODE CHIP CS70-04 SOT23
D107	RCD170004-0010	DIODE CHIP CS70-04 SOT23
D106	RCD170004-0010	DIODE CHIP CS70-04 SOT23

IC

IC102	RCI003415-0001	IC 44 PIN MSP3415G PMQFP44
R103	RCI003580-0001	IC 8 PIN LM358MX NS
IC409	RCI004052-0001	IC 16 PIN TC4052BFN CHIP
IC411	RCI004558-0003	IC 8PIN TEXAS RC4558D SOP8
IC410	RCI004558-0003	IC 8PIN TEXAS RC4558D SOP8
IC405	RCI004558-0003	IC 8PIN TEXAS RC4558D SOP8
IC103	RCI005228-0001	IC 8PIN TP5228 SOP-8 TOPRO
IC101	RCI740004-0003	IC 14 PIN 74HCU04D PHILIPS

TRANSISTOR

Q116	RCM003403-2002	FET AO34P03 SOT236 ALPHA-30V
Q115	RCM003403-2002	FET AO34P03 SOT236 ALPHA-30V
Q502	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q501	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q405	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q404	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q114	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q113	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q112	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q414	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q410	RCN005783-0001	XISTR NPN CM5783GR SOT23
Q412	RCP005051-0001	XISTR PNP CM5051-O SOT23
ZD403	RCZ005005-0030	CHIP ZENER 5.1V 5% 0.5W(E1)
ZD404	RCZ005005-0030	CHIP ZENER 5.1V 5% 0.5W(E1)
ZD501	RCZ005006-0011	CHIP ZENER 5.6V 5% 0.5W (E2)
ZD101	RCZ005006-0011	CHIP ZENER 5.6V 5% 0.5W (E2)
ZD102	RCZ005033-0010	CHIP ZENER 33V 5% 0.5W (M2)

INDUCTOR

L108	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L107	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L106	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L105	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L104	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L103	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L102	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L101	SCN023500-2290	CHIP INDUC 2.2 uH 5% SMD 0805
L501	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
L502	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
L109	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
L110	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
L111	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
FB110	SCN023600-1000	CHIP INDUC 10 uH 10% SMD 0805
FB111	SCN023600-1000	CHIP INDUC 10 uH 10% SMD 0805

WIRE

RB105	VHW243452-0050	SHLD CABLE 50mm BLACK 75 OHM
	VWR0670AA-0050	CON/WIRE 1P 50mm 1571#30 WHT

ELECTRICAL PARTS LIST MAIN BOARD

MISCELLANEOUS

CN1010	CCN200000-0106	CONNECTOR 6 PIN PITCH=2.0mm
CN1008	CCN200000-0108	CONNECTOR 8 PIN PITCH=2.0mm
CN106	CCN200000-0109	CONNECTOR 9 PIN PITCH=2.0mm
CN1009	CCN200000-0111	CONNECTOR 11 PIN PITCH=2.0mm
CN1002	CCN254020-0440	CONNECTOR 20x2 PIN PLUG BASE
CN101A	CCP200060-0724	HEADER PIN 2x12P L3+10+5xP2mm
JW101	CCP254040-0502	HEADER PIN 2 PIN DIM C=10.5 mm
CN1006	CHC200040-0820	CHIP HOUSE 2x10P P2xW3.8xH5.2mm
CN102A	CHC200040-0822	CHIP HOUSE 2x11P P2xW3.8xH5.2mm
	DHU214001-0001	BETTERY HOLDER 16.5x11.3x5.38mm
BT101	FBY005037-0001	LITHIUM BATTERY 3.7V DIA20xH3.2mm
XL102	JCQ112000-1461	CRYSTAL 14.31818MHZ HC-49US
XL101	JCQ112000-2760	CRYSTAL 27.0000MHZ HC-49US
XL104	JCQ112000-4560	CRYSTAL 4.500MHZ HC-49US
XL103	JQC032000-3231	CRYSTAL ;32.768KHZ C-001R

CAPACITORS

C1133	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1132	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1129	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1127	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1142	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1234	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1183	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1115	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C1123	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C417	PRE039570-1000	COND ELECT 10 uF 50V 20%
C416	PRE039570-1000	COND ELECT 10 uF 50V 20%
C414	PRE039570-1000	COND ELECT 10 uF 50V 20%
C412	PRE039570-1000	COND ELECT 10 uF 50V 20%
C405	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1122	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1121	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1112	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1109	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1103	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1137	PRE039570-1000	COND ELECT 10 uF 50V 20%
C1226	PRE939540-1010	COND ELECT 100 uF 16V 20%
C1223	PRE939540-1010	COND ELECT 100 uF 16V 20%
C1135	PRE939540-1010	COND ELECT 100 uF 16V 20%
C1117	PRE939540-1010	COND ELECT 100 uF 16V 20%
C1110	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1119	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1120	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1180	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1181	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1182	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1107	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1228	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1139	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1138	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C1187	PRE939570-1000	COND ELECT 10uF 50V 20% H=7mm 85'
C419	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C418	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C1140	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C1189	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C1188	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C1200	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C1221	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C1144	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C1145	PXL410370-2200	CHIP CAP 22 pF 50V 5%
C415	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C413	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C407	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C406	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1006	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1154	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1153	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1152	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1151	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1150	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1149	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1148	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1147	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1125	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1031	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1094	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1093	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1092	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1091	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1090	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1089	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1088	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1087	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1086	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1085	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1084	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1083	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1082	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1081	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1080	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1079	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1078	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1077	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1076	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1075	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1074	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1073	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1072	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1071	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1070	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1069	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1068	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1067	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1066	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1065	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1064	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1063	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1062	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1061	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1060	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1059	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1058	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1057	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1056	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1055	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1054	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1053	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1052	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1051	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1050	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1049	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1048	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1047	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1043	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1045	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1041	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1039	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1038	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1037	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1036	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1035	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1034	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1020	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1026	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1023	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1022	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1021	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1017	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1016	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1015	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1014	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1233	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1235	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1236	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1237	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1238	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1239	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1240	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1241	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1242	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1243	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1244	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1245	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1246	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1247	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1248	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1032	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1225	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1179	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1178	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1177	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1175	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1174	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1173	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1172	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1171	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1170	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1169	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1168	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1167	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1166	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1165	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1164	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1163	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1162	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1161	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1160	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1159	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1158	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1157	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1156	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1155	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1025	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1232	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1143	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1176	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1124	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1044	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1146	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1184	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1040	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1046	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1224	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1024	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1185	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1186	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1190	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1191	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1192	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1194	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1195	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%

C1036	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1035	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1034	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1020	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1026	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1023	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1022	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1021	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1017	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1016	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1015	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1014	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1233	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1235	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1236	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1237	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1238	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1239	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1240	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1241	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1242	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1243	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1244	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1245	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1246	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1247	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1248	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1032	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1225	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1179	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1178	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1177	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1175	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1174	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1173	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1172	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1171	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1170	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1169	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1168	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1167	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1166	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1165	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1164	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1163	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1162	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1161	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1160	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1159	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1158	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1157	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1156	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1155	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1025	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1232	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1143	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1176	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1124	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1044	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1146	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1184	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1040	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1046	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1224	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1024	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1185	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1186	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1190	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1191	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1192	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1194	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C1195	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%

ELECTRICAL PARTS LIST MAIN BOARD

R1015	QCF165030-3300	CHIP RES. 33 OHM 1/16 W 5%
R1013	QCF165030-3300	CHIP RES. 33 OHM 1/16 W 5%
R1012	QCF165030-3300	CHIP RES. 33 OHM 1/16 W 5%
R1008	QCF165030-3300	CHIP RES. 33 OHM 1/16 W 5%
R1009	QCF165030-3300	CHIP RES. 33 OHM 1/16 W 5%
R1034	QCF165030-3300	CHIP RES. 33 OHM 1/16 W 5%
R1067	QCF165030-3910	CHIP RES. 390 OHM 1/16 W 5%
R1080	QCF165030-4710	CHIP RES. 470 OHM 1/16 W 5%
R1079	QCF165030-4710	CHIP RES. 470 OHM 1/16 W 5%
R1127	QCF165030-4710	CHIP RES. 470 OHM 1/16 W 5%
R1010	QCF165030-4710	CHIP RES. 470 OHM 1/16 W 5%
R1069	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1068	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1074	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1042	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1075	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1073	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1072	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1061	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1062	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1088	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1090	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1091	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1093	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1011	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1078	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1083	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1160	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R241	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R240	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R234	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R233	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1094	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R423	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R422	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1087	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1150	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1152	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1154	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R1169	QCF165030-5630	CHIP RES. 56K OHM 1/16 W 5%
R1149	QCF165030-5630	CHIP RES. 56K OHM 1/16 W 5%
R1153	QCF165030-5630	CHIP RES. 56K OHM 1/16 W 5%
R1151	QCF165030-5630	CHIP RES. 56K OHM 1/16 W 5%
R1114	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1115	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1116	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1117	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1118	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1119	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1120	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1121	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1166	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1167	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1168	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1126	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1133	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1162	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%
R1161	QCF165030-7500	CHIP RES. 75 OHM 1/16 W 5%

CHIP ARRAY

RB1034	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1033	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1032	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1031	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1030	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1029	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1027	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1026	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1025	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1024	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1023	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1022	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1021	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1020	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1019	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1018	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1017	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1016	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1028	QCP015081-1000	CHIP ARRAY 10 OHMx4 1/10 W 5%
RB1006	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB1005	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB1004	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB1003	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB211	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB210	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1015	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1014	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1013	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1012	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1011	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1010	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1009	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1008	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1007	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1002	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1001	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1000	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%
RB1035	QCP015081-3300	RES ARRAY 4x33 OHM 1/10W 5%

DOIDE

ZD101	RAZ005004-0030	DIODE ZENR 4.1-4.3V 0.5W
D105	RCD114148-0011	DIODE CHIP BAV16W/IN4148W (SKYWELL)
D103	RCD114148-0011	DIODE CHIP BAV16W/IN4148W (SKYWELL)
D107	RCD114148-0011	DIODE CHIP BAV16W/IN4148W (SKYWELL)
D106	RCD114148-0011	DIODE CHIP BAV16W/IN4148W (SKYWELL)
D101	RCD154003-0010	DIODE CHIP CS54-03-W SOT323 KOTEK

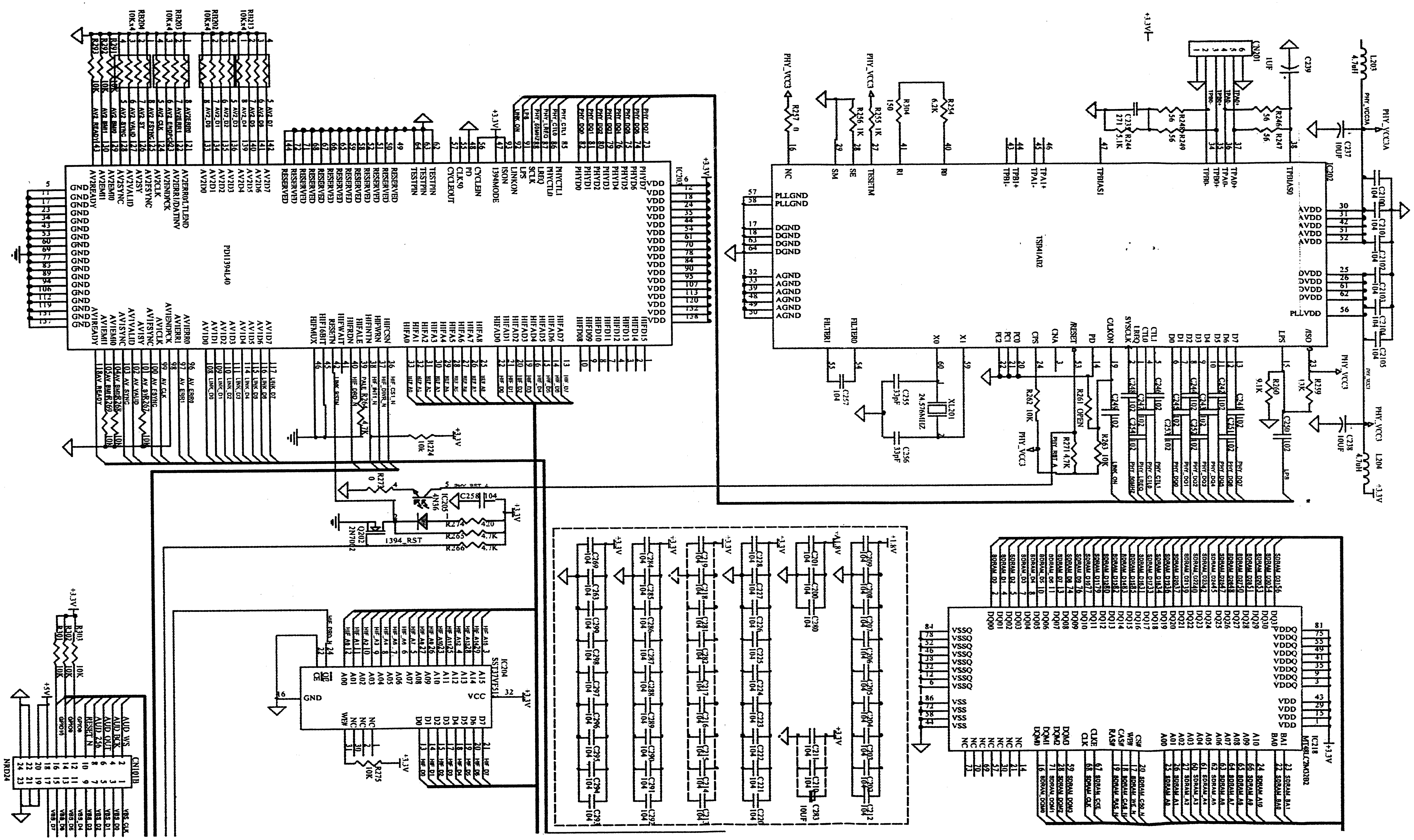
IC

IC1034	RCI000809-0003	IC 3 PIN IMP809SEUR-T SOT23 RESET2.93V
IC1038	RCI000809-0003	IC 3 PIN IMP809SEUR-T SOT23 RESET2.93V
IC1029	RCI001226-0001	IC 8 PIN X1226S8 SOIC XICOR
IC1009	RCI002064-0001	IC 44 PIN ispLSI2064VE-135LT44 TQFP LATT
IC1031	RCI002534-0001	IC 8 PIN NJM2534M SSOP JRC 3-I/P 1-O/P
IC219	RCI004120-0001	IC 24 PIN AK4120VF VSOP AKM
IC402	RCI004334-0001	IC 8 PIN CS4334 CRYSTAL扴 DAC
IC1037	RCI005146-0001	IC 80 PIN TVP5146 PQFP TI NTSC/PAL/SECAM
IC403	RCI005333-0001	IC CS5333 16 PIN TSSOP
IC1018	RCI006128-0001	IC 208 PIN ES6128F ESS PQFP VIBRTTO-S
IC1005	RCI007010-0001	IC 208 PIN ES7010F PQFP ESS
IC1019	RCI022392-0001	IC 16 PIN CY22392FC TSSOP CYPRESS
IC1007	RCI041620-0001	IC 54 PIN SD41620HGT-6 TSOP MOBICON
IC1006	RCI041620-0001	IC 54 PIN SD41620HGT-6 TSOP MOBICON
IC1028	RCI240016-0002	IC 8 PIN 24LC16B-SN SOIC MICROCHIP
IC1015	RCI290160-0002	IC 48 PIN MBM29LV160BE70TN TSOP FUJITSU
IC1008	RCI421680-0001	IC 54 PIN IS42S16800-7T TSOP ISSI 133MHZ
IC1011	RCI740138-0003	IC 16 PIN SN74LVC138APWR TSSOP TI
IC1023	RCI740157-0004	IC 16 PIN SN74LVC157APWR TSSOP TI
IC1001	RCI740157-0004	IC 16 PIN SN74LVC157APWR TSSOP TI
IC1022	RCI740244-0008	IC 20 PIN SN74LVC244APWR TSSOP TI
IC1004	RCI740244-0008	IC 20 PIN SN74LVC244APWR TSSOP TI
IC1013	RCI740273-0002	IC 20 PIN SN74LVTH273PWR TSSOP TI
IC1012	RCI740273-0002	IC 20 PIN SN74LVTH273PWR TSSOP TI
IC1010	RCI740374-0006	IC 20 PIN SN74LVC374APWR TSSOP TI
IC1014	RCI741004-0001	IC 5 PIN SN74LVC1G04DBVR SOT23 TI
IC1032	RCI743125-0001	IC 16 PIN SN74CBTLV3125PWR TSSOP TI
IC1033	RCI743125-0001	IC 16 PIN SN74CBTLV3125PWR TSSOP TI
IC1003	RCI743861-0001	IC 24 PIN SN74CBTLV3861PWR TSSOP TI
IC1002	RCI743861-0001	IC 24 PIN SN74CBTLV3861PWR TSSOP TI
IC1026	RCI916400-0001	IC 3P RT9164-CG ADJUSTABLE (2.75~2.85V)
IC1024	RCI916400-0001	IC 3P RT9164-CG ADJUSTABLE (2.75~2.85V)
IC210	RCI916400-0001	IC 3P RT9164-CG ADJUSTABLE (2.75~2.85V)
IC1027	RCI916433-0001	IC 3 PIN RT9164-33CLR
IC1036	RCI916433-0001	IC 3 PIN RT9164-33CLR
Q109	RCM003403-2002	FET AO34P03 SOT236 ALPHA -30V/-2.6A
Q110	RCM003403-2002	FET AO34P03 SOT236 ALPHA -30V/-2.6A
Q114	RCM003403-2002	FET AO34P03 SOT236 ALPHA -30V/-2.6A
Q115	RCM003403-2002	FET AO34P03 SOT236 ALPHA -30V/-2.6A
Q101	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q102	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q103	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q104	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q105	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q106	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q107	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q108	RCM070002-1001	FET CM70A02 SOT23 KOTEX
Q111	RCN005783-0001	XISTR NPN CM5783GR SOT23 HFE:200-400
Q112	RCN005783-0001	XISTR NPN CM5783GR SOT23 HFE:200-400
Q113	RCN005783-0001	XISTR NPN CM5783GR SOT23 HFE:200-400
Q116	RCN005783-0001	XISTR NPN CM5783GR SOT23 HFE:200-400
IC1035	RHI008057-0001	IC 28PIN CTM8B57EN PDIP CERAMATE

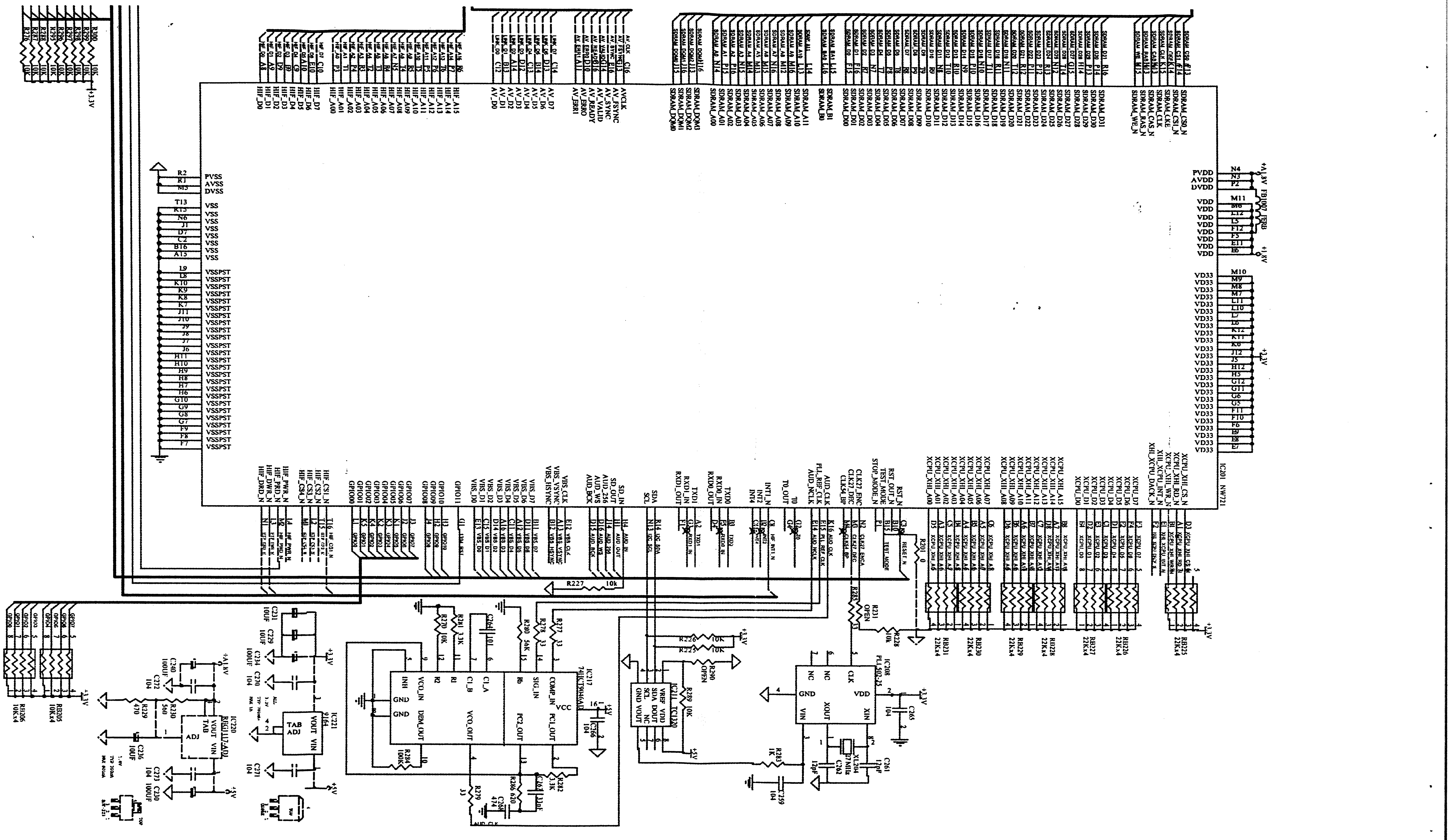
BEAD

R1032	SCB006030-1211	CHIP BEAD 120 OHM 10% 掮 DK□
R1033	SCB006030-1211	CHIP BEAD 120 OHM 10% 掮 DK□
R1037	SCB006030-1211	CHIP BEAD 120 OHM 10% 掮 DK□
R1036	SCB006030-1211	CHIP BEAD 120 OHM 10% 掮 DK□
FB1005	SCB008050-6010	CHIP BEAD 600 OHM AT 100MHz
FB1000	SCB008050-6010	CHIP BEAD 600 OHM AT 100MHz
FB1004	SCB008050-6010	CHIP BEAD 600 OHM AT 100MHz
L101	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
L404	SCN023600-1000	CHIP INDUC 10 uH 10% SMD 0805
L403	SCN023600-1000	CHIP INDUC 10 uH 10% SMD 0805
L402	SCN023600-1000	CHIP INDUC 10 uH 10% SMD 0805
L401	SCN023600-1000	CHIP INDUC 10 uH 10% SMD 0805
FB1006	SFB001001-0030	BEAD FERIT DIA3.5x6mm

DV PCB SCHEMATIC DIAGRAM (TOP PART)

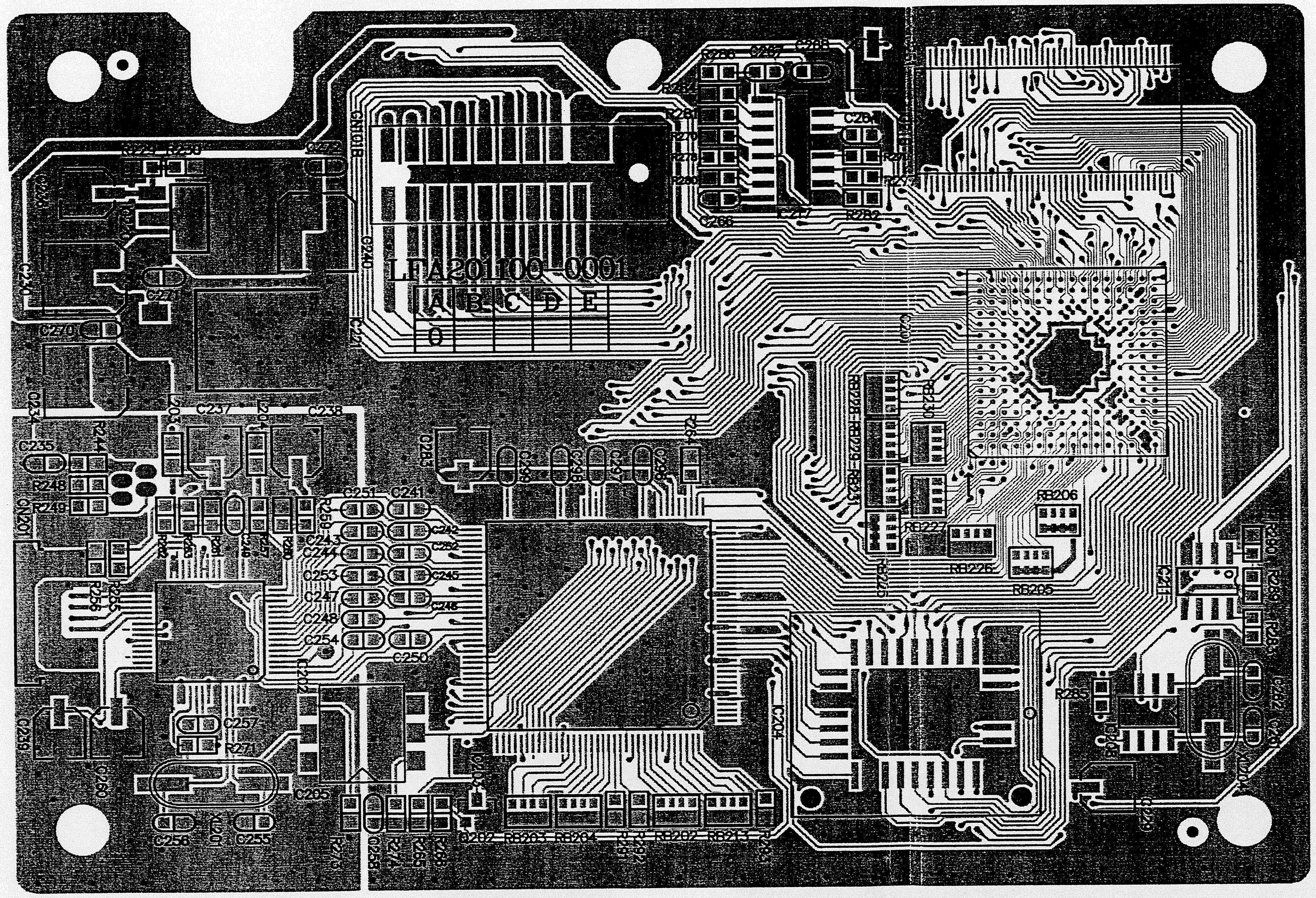

IC201
PDI1394L40
IC202
TSB41AB2
IC204
SST39VF512
IC218
MT48LC2M32B2
IC205
4N36
Q202
2N7002
1394_RST
XL201
24.576MHZ
CN101B
NRD24
CN201
+3.3V
+1.8V
+5V
PHY_VCC3
PHY_VCCA

DV PCB SCHEMATIC DIAGRAM (BOTTOM PART)

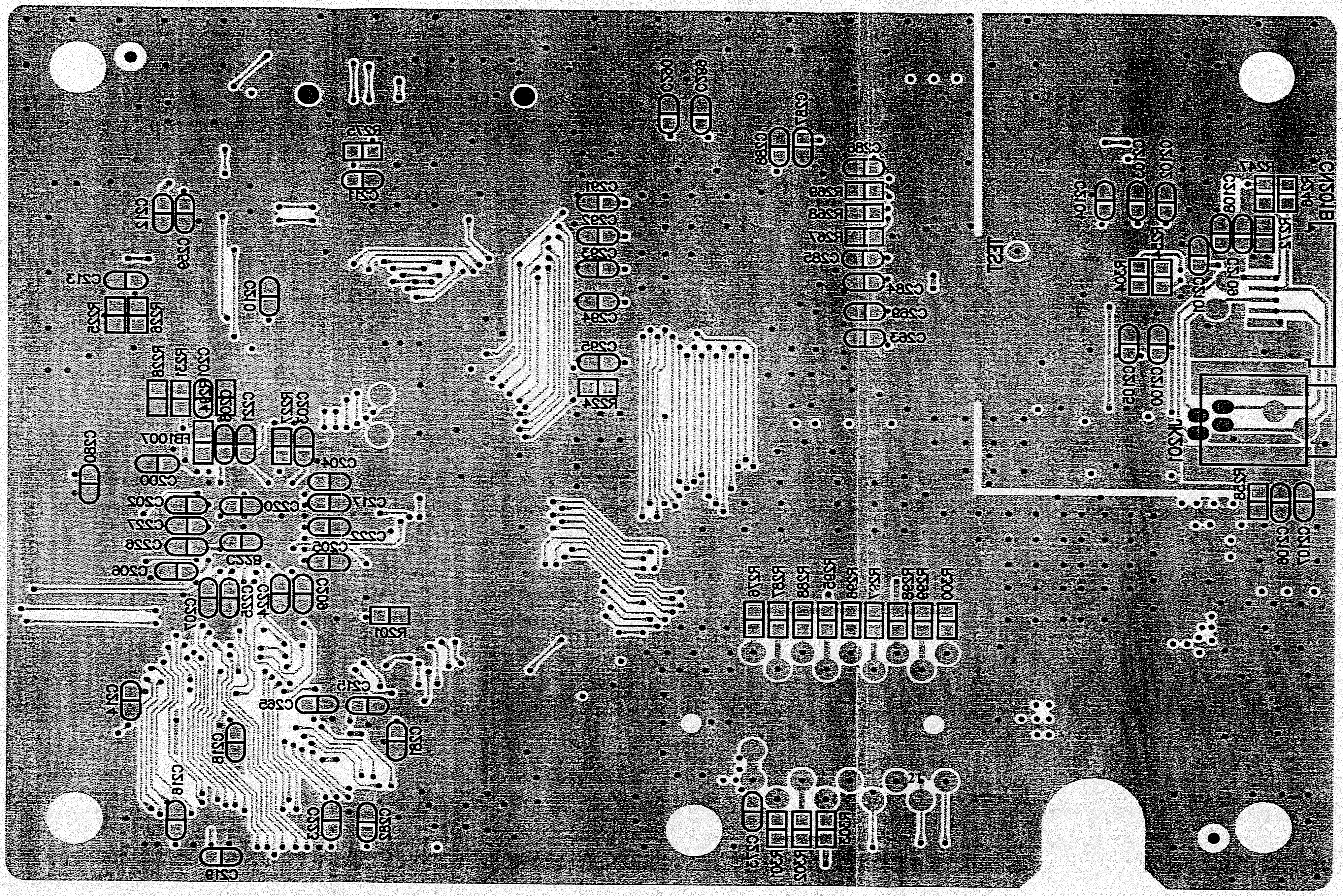


IC201 NW721
PVSS
AVSS
DVSS
VSS
VSSPST
PVDD
AVDD
DVDD
VDD
VD33
+1.8V
+3.3V
+5V
R227 10k
R226 10K
R223 10K
R290 OPEN
R289 10K
R231 OPEN
R228 10k
R201 0
R283 1K
IC217 74HCT9046A
VCC
INH
GND
VCO_IN
DEM_OUT
VCO_OUT
C1_A
C1_B
R1
R2
SIG_IN
COMP_IN
PC1_OUT
PC2_OUT
R270 10K
R281 3.3K
R280 56K
R278 33
R277 33
R284 100K
R286 620
R282 3.3K
R279 33
C266 104
C264 101
IC211 TC120
VREF VDD
SDA DOUT
SCL NC
GND VOUT
IC208 PLL502-25
NC
CLK
GND
VDD
VIN
XOUT
XIN
X1,204 27MHz
C262 12pF
C261 12pF
C265 104
C259 104
IC220
IC221
TAB ADJ
VOUT VIN
ADJ
C231 10UF
C229 10UF
C234 100UF
C270 104
C271 104
C240 100UF
C272 104
C236 10UF
C273 104
C230 100UF
R229 470
R230 560
RB225 22Kx4
RB226 22Kx4
RB227 22Kx4
RB228 22Kx4
RB229 22Kx4
RB230 22Kx4
RB231 22Kx4
RB205 10Kx4
RB206 10Kx4
HIF_D0
HIF_D1
HIF_D2
HIF_D3
HIF_D4
HIF_D5
HIF_D6
HIF_D7
HIF_A00
HIF_A15
AV_CLK
AV_FSYNC
AV_SYNC
AV_VALID
AV_READY
AV_ERR0
AV_ERR1
AV_D0
AV_D7
SDRAM_DQM0
SDRAM_DQM3
SDRAM_A00
SDRAM_A11
SDRAM_B0
SDRAM_B1
SDRAM_D00
SDRAM_D31
SDRAM_CS0_N
SDRAM_CS1_N
SDRAM_CKE
SDRAM_CLK
SDRAM_CAS_N
SDRAM_RAS_N
SDRAM_WE_N
HIF_DRD_N
HIF_DWR_N
HIF_PRD_N
HIF_PWR_N
HIF_CS0_N
HIF_CS1_N
HIF_CS2_N
HIF_CS3_N
GPIO00
GPIO11
VBS_D0
VBS_D7
VBS_HSYNC
VBS_VSYNC
VBS_CLK
AUD_BCK
AUD_WS
AUD_256
SD_OUT
SD_IN
SDA
SCL
RXD_OUT
RXD_IN
TXD1
RXD0_OUT
RXD0_IN
TXD0
INT4
INT2
INT1_N
T0_OUT
T0
AUD_NCLK
PLL_REF_CLK
AUD_CLK
CLK54_DP
CLK27_DRC
CLK27_ENC
STOP_MODE_N
TEST_MODE
RST_OUT_N
RST_N
XCPU_XHI_A00
XCPU_XHI_A18
XCPU_D0
XCPU_D7
XHI_XCPU_DACK_N
XHI_XCPU_INT_N
XCPU_XHI_WR_N
XCPU_XHI_RD_N
XCPU_XHI_CS_N

DV IN PCB TOP LAYER


LFA201100_0001
A B C D E
0
CN101B
CN201
C237
C238
C241
C251
C243
C244
C253
C247
C248
C254
C250
C257
R271
C205
C258
C255
RB203
RB204
RB202
RB211
RB206
RB227
RB226
RB205
RB230
R285
C266
C288
C287
C270
C235
R248
R249
R244

DV IN PCB BOTTOM LAYER



IC21
K201
C213
C212
C204
C200
C202
C206
C280
FB1007
R201
C219
C218

ELECTRICAL PARTS LIST DV IN BOARD

MISCELLANEOUS

	CSL207035-1602	SOLDER LUG OD7.0xID3.5xT0.3
XL201	JCQ112000-2461	CRYSTAL 24.576MHZ HC-49US
XL204	JCQ112000-2760	CRYSTAL 27.0000MHZ HC-49US
	VWR0121AA-0030	WIRE 30mm UL1007#20 A,B=STP3

CAPACITORS

C229	PBE039540-1000	VER. CHIP 10uF 16V 20%
C236	PBE039540-1000	VER. CHIP 10uF 16V 20%
C237	PBE039540-1000	VER. CHIP 10uF 16V 20%
C238	PBE039540-1000	VER. CHIP 10uF 16V 20%
C283	PBE039540-1000	VER. CHIP 10uF 16V 20%
C231	PBE039540-1000	VER. CHIP 10uF 16V 20%
C230	PBE039540-1010	VER.CHIP 100uF 16V 20%
C234	PBE039540-1010	VER.CHIP 100uF 16V 20%
C240	PBE039540-1010	VER.CHIP 100uF 16V 20%
C239	PBE039570-1090	COND ELECT 1.0 uF 50V 20%
C260	PBE039570-1090	COND ELECT 1.0 uF 50V 20%
C264	PXL410370-1010	CHIP CAP 100 pF 50V 5%
C255	PXL410370-2000	CHIP CAP 20 pF 50V 5%
C256	PXL410370-2000	CHIP CAP 20 pF 50V 5%
C261	PXL410370-2000	CHIP CAP 20 pF 50V 5%
C262	PXL410370-2000	CHIP CAP 20 pF 50V 5%
C235	PXL410370-2710	CHIP CAP 270 pF 50V 5%
C272	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C270	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C258	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C296	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C297	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C298	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C299	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C266	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C271	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C257	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C265	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C259	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C207	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C206	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C205	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C203	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C202	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C201	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C263	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C228	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C227	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C226	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C225	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C224	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C223	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C222	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C221	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C220	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C219	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C218	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C217	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C216	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C200	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C204	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C208	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C209	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C210	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C211	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C212	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C213	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C214	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C215	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C269	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C280	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C281	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C282	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C284	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C285	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C286	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C287	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C288	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C289	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C290	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C291	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C292	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C293	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C294	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C295	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C2100	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C2101	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C2102	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C2103	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C2104	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C2105	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C273	PXL439570-1040	CHIP CAP 0.1 uF 50V 20%
C268	PXL439640-4740	CHIP CAP 0.47 uF 16V +80%
C250	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C241	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C242	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C243	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C244	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C245	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C246	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C247	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C248	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C249	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C251	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C252	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C253	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C254	PXL456470-1020	CHIP CAP 0.001 uF 50V 10%
C267	PXL456470-3330	CHIP CAP 0.033 uF 50V 10%

RESISTORS

R273	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R257	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R272	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
FB1007	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R201	QCF165030-0000	CHIP RES. 0 OHM JUMP WIRE
R255	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R256	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R283	QCF165030-1020	CHIP RES. 1K OHM 1/16 W 5%
R262	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R263	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R289	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R291	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R292	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R293	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R270	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R225	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R226	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R227	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R275	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R276	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R268	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R269	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R228	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R224	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R267	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R295	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R296	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R297	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R298	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R299	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R300	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R301	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R302	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R303	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R288	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R287	QCF165030-1030	CHIP RES. 10K OHM 1/16 W 5%
R284	QCF165030-1040	CHIP RES. 100K OHM 1/16 W 5%
R259	QCF165030-1330	CHIP RES. 13K OHM 1/16 W 5%
R304	QCF165030-1510	CHIP RES. 150 OHM 1/16 W 5%
R229	QCF165030-2210	CHIP RES. 220 OHM 1/16 W 5%
R281	QCF165030-3320	CHIP RES. 3.3K OHM 1/16 W 5%
R282	QCF165030-3320	CHIP RES. 3.3K OHM 1/16 W 5%
R274	QCF165030-4710	CHIP RES. 470 OHM 1/16 W 5%
R230	QCF165030-4710	CHIP RES. 470 OHM 1/16 W 5%
R266	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R265	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R264	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R271	QCF165030-4720	CHIP RES. 4.7K OHM 1/16 W 5%
R248	QCF165030-5100	CHIP RES. 51 OHM 1/16 W 5%
R246	QCF165030-5100	CHIP RES. 51 OHM 1/16 W 5%
R247	QCF165030-5100	CHIP RES. 51 OHM 1/16 W 5%
R249	QCF165030-5100	CHIP RES. 51 OHM 1/16 W 5%
R244	QCF165030-5120	CHIP RES. 5.1K OHM 1/16 W 5%
R280	QCF165030-5630	CHIP RES. 56K OHM 1/16 W 5%
R254	QCF165030-6220	CHIP RES. 6.2K OHM 1/16 W 5%
R286	QCF165030-6810	CHIP RES. 680 OHM 1/16 W 5%
R260	QCF165030-9120	CHIP RES. 9.1K OHM 1/16 W 5%
RB202	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB203	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB204	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB213	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB225	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB226	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB227	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB228	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB229	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB230	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB231	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB205	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%
RB206	QCP015081-1030	CHIP ARRAY 10KOHMx4 1/10 W 5%

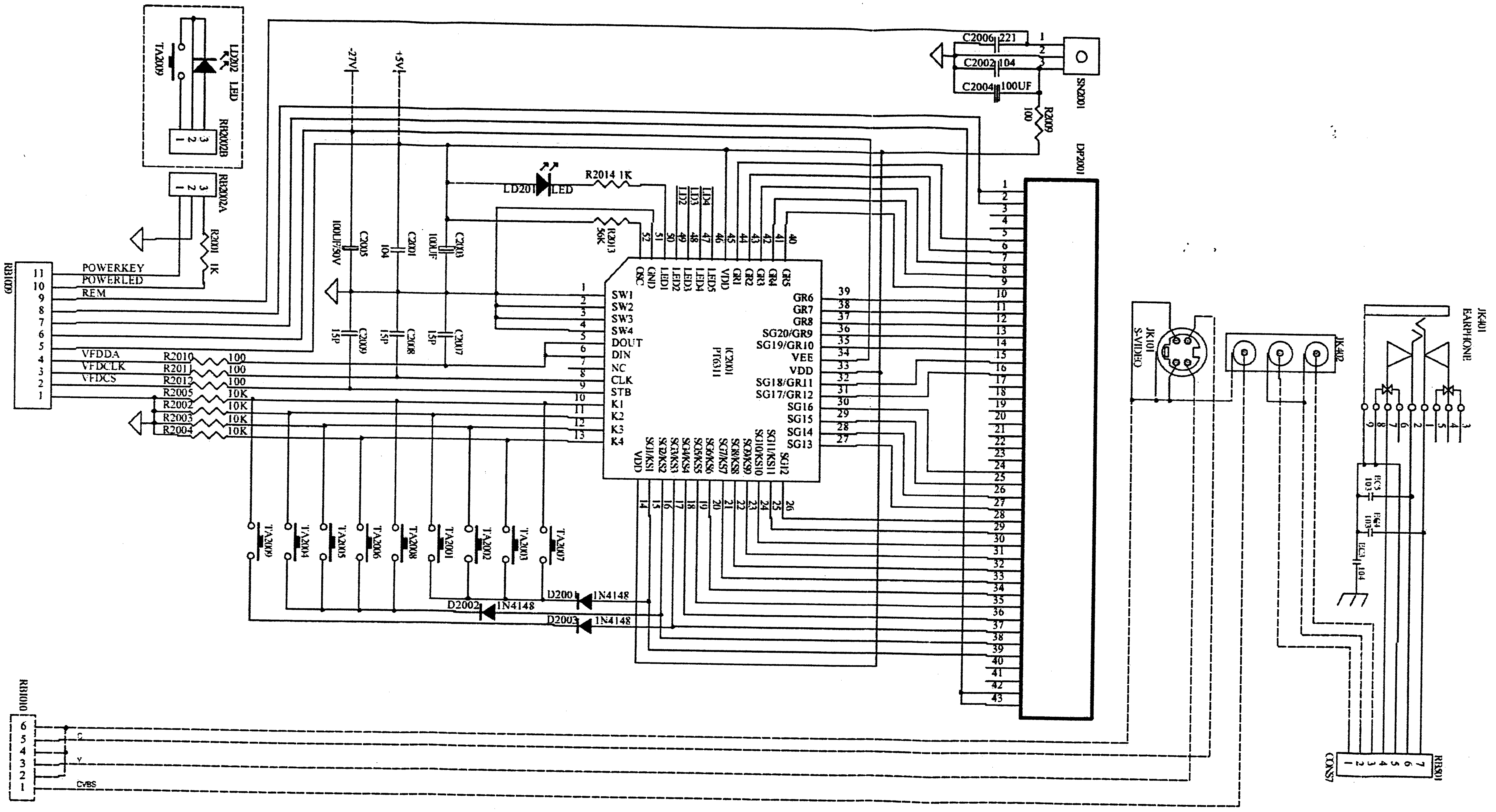
IC

IC211	RCI001321-0002	IC 8 PIN TC1321EOA SOIC MICROCHIP
IC201	RCI007210-0001	IC 256 PIN NW721 BGA256 DIVIO
IC220	RCI011170-0001	IC 4 PIN B1117N-2.85 SOT-223 1A
IC202	RCI041002-0001	IC 64 PIN TSB41AB2 TQFP TI
IC203	RCI139440-0001	IC 144 PIN PDI1394L40 LQFP PHILIPS
IC218	RCI203203-0001	IC 86 PIN 2MX32Y3VTW TSOP STAR RAM
IC204	RCI390010-0001	IC 32 PIN SST39VF010-70-4C-NH PLCC SST
IC208	RCI502025-0001	IC 8 PIN PLL502-25SC SOIC PLL 12~27MHZ
IC217	RCI749046-0001	IC 16 PIN 74HCT9046AD SO16 PHILIPS
IC221	RCI916433-0001	IC 3 PIN RT9164-33CLR
Q202	RCM070002-1001	FET CM70A02 SOT23 KOTEX
IC205	RCO403600-3001	CHIP PHOTO COUPLER 4N36SD FAIRCHILD

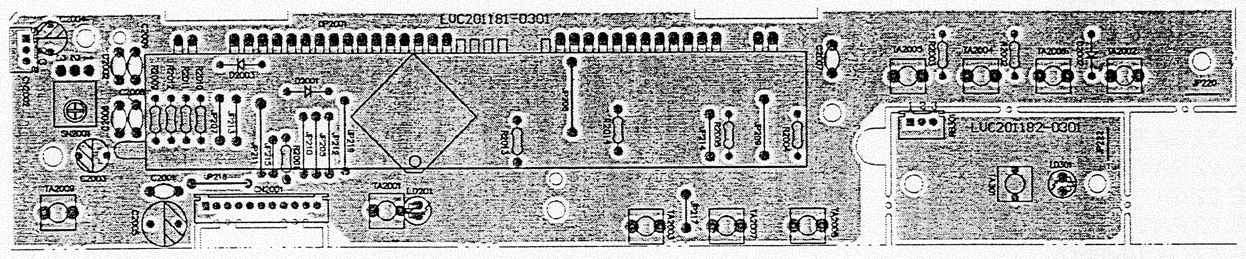
BEAD

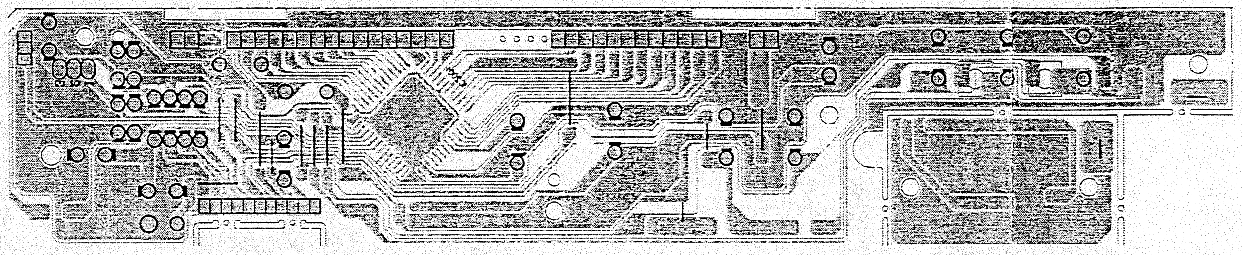
R285	SCB006030-1211	CHIP BEAD 120 OHM 10%
R277	SCB006030-1211	CHIP BEAD 120 OHM 10%
R278	SCB006030-1211	CHIP BEAD 120 OHM 10%
R279	SCB006030-1211	CHIP BEAD 120 OHM 10%
L203	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805
L204	SCN023500-2490	CHIP INDUC 2.4 uH 5% SMD 0805

CONTORL PCB SCHEMATIC DIAGRAM


TA2009
LD202 LED
RB2002B
RB2002A
R2001 1K
RB1009
POWERKEY
POWERLED
REM
VFDDA
VFDCLK
VFDCS
R2010 100
R2011 100
R2012 100
R2005 10K
R2002 10K
R2003 10K
R2004 10K
-27V
+5V
C2005 100UF/50V
C2001 104
C2003 100UF
C2009 15P
C2008 15P
C2007 15P
LD201 LED
R2014 1K
R2013 56K
IC2001 PT6311
SW1
SW2
SW3
SW4
DOUT
DIN
NC
CLK
STB
K1
K2
K3
K4
OSC
GND
LED1
LED2
LED3
LED4
LED5
VDD
GR1
GR2
GR3
GR4
GR5
GR6
GR7
GR8
SG20/GR9
SG19/GR10
VEE
VDD
SG18/GR11
SG17/GR12
SG16
SG15
SG14
SG13
SG12
SG11/KS11
SG10/KS10
SG9/KS9
SG8/KS8
SG7/KS7
SG6/KS6
SG5/KS5
SG4/KS4
SG3/KS3
SG2/KS2
SG1/KS1
LD1
LD2
LD3
LD4
TA2009
TA2004
TA2005
TA2006
TA2008
TA2001
TA2002
TA2003
TA2007
D2001 1N4148
D2002 1N4148
D2003 1N4148
C2006 221
C2002 104
C2004 100UF
SN2001
R2009 100
DP2001
JK101 S-VIDEO
JK402
JK401 EARPHONE
EC3 103
EC4 103
EC5 104
RB801
CON7
RB1010
C
Y
CVBS

CONTORL PCB LAYOUT

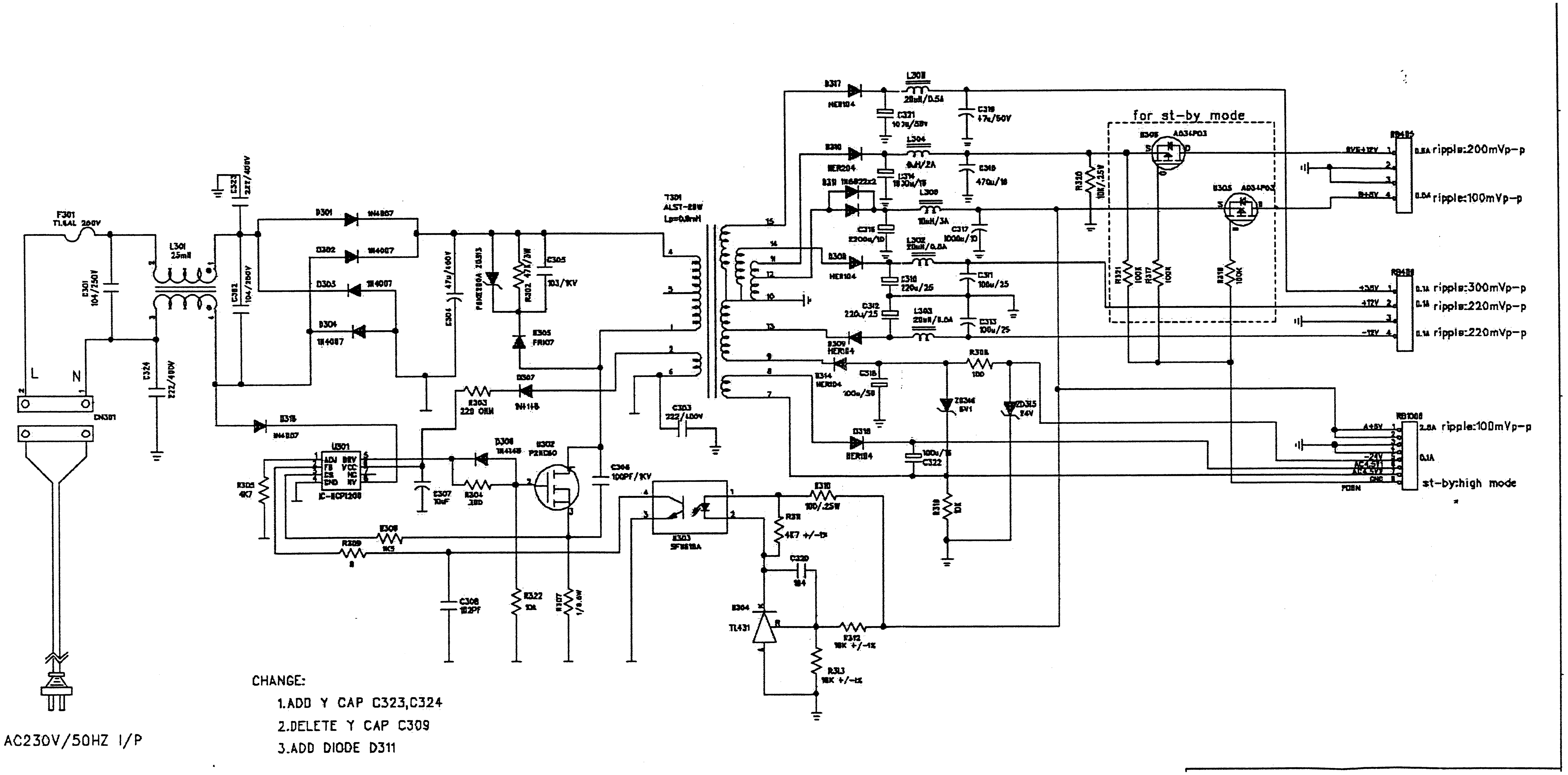

LUC201181-0301
LUC201182-0301
C2004
C2009
C2008
C2007
C2005
C2002
CN2001
CN2002
DP2001
D2001
D2003
D2002
D2004
R2009
R2012
R2011
R2010
R2001
R2013
R2014
R2006
R2004
R2003
R2002
JP207
JP213
JP211
JP215
JP210
JP205
JP212
JP219
JP218
JP209
JP214
JP208
JP217
JP220
JP222
SN2001
E2003
TA2009
TA2001
TA2003
TA2007
TA2006
TA2005
TA2004
TA2008
TA2002
TA301
LD201
LD301
XB301



ELECTRICAL PARTS LIST CONTROL BOARD

MISCELLANEOUS		
JK401	CJM135006-3010	PHONE JACK D3.5mm 5PIN NATURAL
JK402	CJR003703-0010	RCA JACK 3P YEL/WHT/RED NICKEL 6 LEG
P1 P2	CSL207035-0200	SOLDER LUG OD7.0xID3.5xT0.3 mm
P5	CSL207035-0200	SOLDER LUG OD7.0xID3.5xT0.3 mm
P3	CSL207035-1601	SOLDER LUG OD7.0xID3.5xT0.3 mm
P1 P3	CSL207035-1602	SOLDER LUG OD7.0xID3.5xT0.3 mm
	DLH010005-0003	LED HOLDER 2 PIN OD5xID3.5xH6
	DLH010007-0016	LED HOLDER 2 PIN H1.5xOD4.2mm
	IVE100232-0001	SPONGE L10xW7xT8.5mm DR402
	IVE200018-0001	SPONGE EVA(T4xL15xW10)
LD301	KED200002-0010	LED 2 DIA RED ROUND
LD201	KED200003-2010	LED 3 DIA RED ROUND LEAD 10mm
DP2001	KLV000030-0010	VFD 92.2x9mm HNV-12SM62 SAMSUNG
TA2009	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2001	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2002	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2003	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2008	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2007	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2005	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2004	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA2006	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
TA301	MAW060001-0010	AI TACT SW SKHVBE3520 ALPS
CHIP CAPACITORS		
C2007	PRD113370-1500	COND DISC 15 pF 50V 5%
C2006	PRD113370-1500	COND DISC 15 pF 50V 5%
C2008	PRD113370-1500	COND DISC 15 pF 50V 5%
C2009	PRD113370-1500	COND DISC 15 pF 50V 5%
C2001	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
C2002	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
C2013	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
EC4	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
EC5	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
EC6	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
EC7	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
EC8	PRD249670-1040	COND DISC 0.1 uF 50V +80-20%
C2003	PRE939540-1010	COND ELECT 100 uF 16V 20%
C2004	PRE939540-1010	COND ELECT 100 uF 16V 20%
C2005	PRE939560-1010	COND ELECT 100uF 35V 20%
RESISTORS		
R2010	QAF065000-1010	RESISTOR 100 OHM 1/6 W 5% CF
R2011	QAF065000-1010	RESISTOR 100 OHM 1/6 W 5% CF
R2012	QAF065000-1010	RESISTOR 100 OHM 1/6 W 5% CF
R2009	QAF065000-1010	RESISTOR 100 OHM 1/6 W 5% CF
R2014	QAF065000-1020	RESISTOR 1K OHM 1/6 W 5% CF
R2001	QAF065000-1020	RESISTOR 1K OHM 1/6 W 5% CF
R2004	QAF065000-1030	RESISTOR 10K OHM 1/6 W 5% CF
R2005	QAF065000-1030	RESISTOR 10K OHM 1/6 W 5% CF
R2002	QAF065000-1030	RESISTOR 10K OHM 1/6 W 5% CF
R2003	QAF065000-1030	RESISTOR 10K OHM 1/6 W 5% CF
R2013	QAF065000-5630	RESISTOR 56K OHM 1/6 W 5% CF
DIODE		
D2003	RAD114148-0010	DIODE SW 1N4148
D2001	RAD114148-0010	DIODE SW 1N4148
D2002	RAD114148-0010	DIODE SW 1N4148
ZD2001	RAZ005006-0010	DIODE ZENR 5.3-5.5V 0.5W
ZD2000	RAZ005006-0010	DIODE ZENR 5.3-5.5V 0.5W
IC		
IC2001	RCI006311-0003	IC 52 PIN TP6311QH QFP TOPRO
SN2001	RHO200038-0001	IRT SENSOR RIM B38F (TONGTI)
WIRE		
CN2001	VFLB01246-1500	CON/WIRE 11P 150mm 2468#26 RAINBOW
CN2002	VSW324552-0220	SHIELD CABLE 3P 220mm UL2854#28 GRAY
RB403	VWA200039-0023	CON WIRE 7P 220mm 2547#28x2P
RB1010	VWA200117-0001	CON/WIRE 6P 220mm UL1533#26
JP211	XJP220000-0001	WIRE BARE 22 GA TINNED
JP210	XJP220000-0001	WIRE BARE 22 GA TINNED
JP205	XJP220000-0001	WIRE BARE 22 GA TINNED
JP212	XJP220000-0001	WIRE BARE 22 GA TINNED
JP219	XJP220000-0001	WIRE BARE 22 GA TINNED
JP217	XJP220000-0001	WIRE BARE 22 GA TINNED
JP214	XJP220000-0001	WIRE BARE 22 GA TINNED
JP209	XJP220000-0001	WIRE BARE 22 GA TINNED
JP206	XJP220000-0001	WIRE BARE 22 GA TINNED
JP218	XJP220000-0001	WIRE BARE 22 GA TINNED
JP213	XJP220000-0001	WIRE BARE 22 GA TINNED
JP207	XJP220000-0001	WIRE BARE 22 GA TINNED
JP215	XJP220000-0001	WIRE BARE 22 GA TINNED
JP220	XJP220000-0001	WIRE BARE 22 GA TINNED
JP223	XJP220000-0001	WIRE BARE 22 GA TINNED
JP224	XJP220000-0001	WIRE BARE 22 GA TINNED
JU216	XJP220000-0001	WIRE BARE 22 GA TINNED
JP222	XJP220000-0001	WIRE BARE 22 GA TINNED
JP221	XJP220000-0001	WIRE BARE 22 GA TINNED

POWER PCB SCHEMATIC DIAGRAM


F301
T1.6AL 250V
C301
104/250V
L301
25mH
C323
222/400V
C302
104/250V
C324
222/400V
L
N
CN301
AC230V/50HZ I/P
D301
1N4007
D302
1N4007
D303
1N4007
D304
1N4007
D316
1N4007
C304
47u/400V
P6KE200A ZD515
R302 47K/3W
C305
103/1KV
D305
FR107
D307
1N4148
R303
220 OHM
U301
ADJ
FB
CS
GND
DRV
VCC
NC
HV
IC-NCP1200
R305
4K7
C307
10uF
D306
1N4148
R304
330
Q302
P2N060
C306
100PF/1KV
R309
R308
1K5
C308
102PF
R322
R307
1/0.6W
T301
ALST-28W
Lp=0.8mH
C303
222/400V
U303
SFH618A
R310
100/.25W
R311
4K7 +/-1%
C320
104
U304
TL431
R312
10K +/-1%
R313
10K +/-1%
D317
HER104
L301
20uH/0.5A
C321
1000u/50V
C319
47u/50V
D310
HER204
L304
8uH/2A
L314
1000u/16
C318
470u/16
D311 1N5822x2
L309
10uH/3A
C315
2200u/10
C317
1000u/10
L302
20uH/0.8A
D308
HER104
C310
220u/25
C311
100u/25
C312
220u/25
L303
20uH/0.8A
C313
100u/25
D309
HER104
D314
HER104
C316
100u/50
R306
100
ZD346
5V1
ZD315
24V
D318
HER104
C322
100u/16
R318
10K
R320
10K/.25W
for st-by mode
Q306
AO34P03
Q305
AO34P03
S
D
R321
100K
R317
100K
R319
100K
RB485
5VE+12V
B+5V
0.8A ripple:200mVp-p
0.04 ripple:100mVp-p
RB488
+35V
+12V
-12V
0.1A ripple:300mVp-p
0.1A ripple:220mVp-p
0.1A ripple:220mVp-p
RB1088
A+5V
-24V
AC4.5V1
AC4.5V2
GND
PDEN
2.8A ripple:100mVp-p
0.1A
st-by:high mode

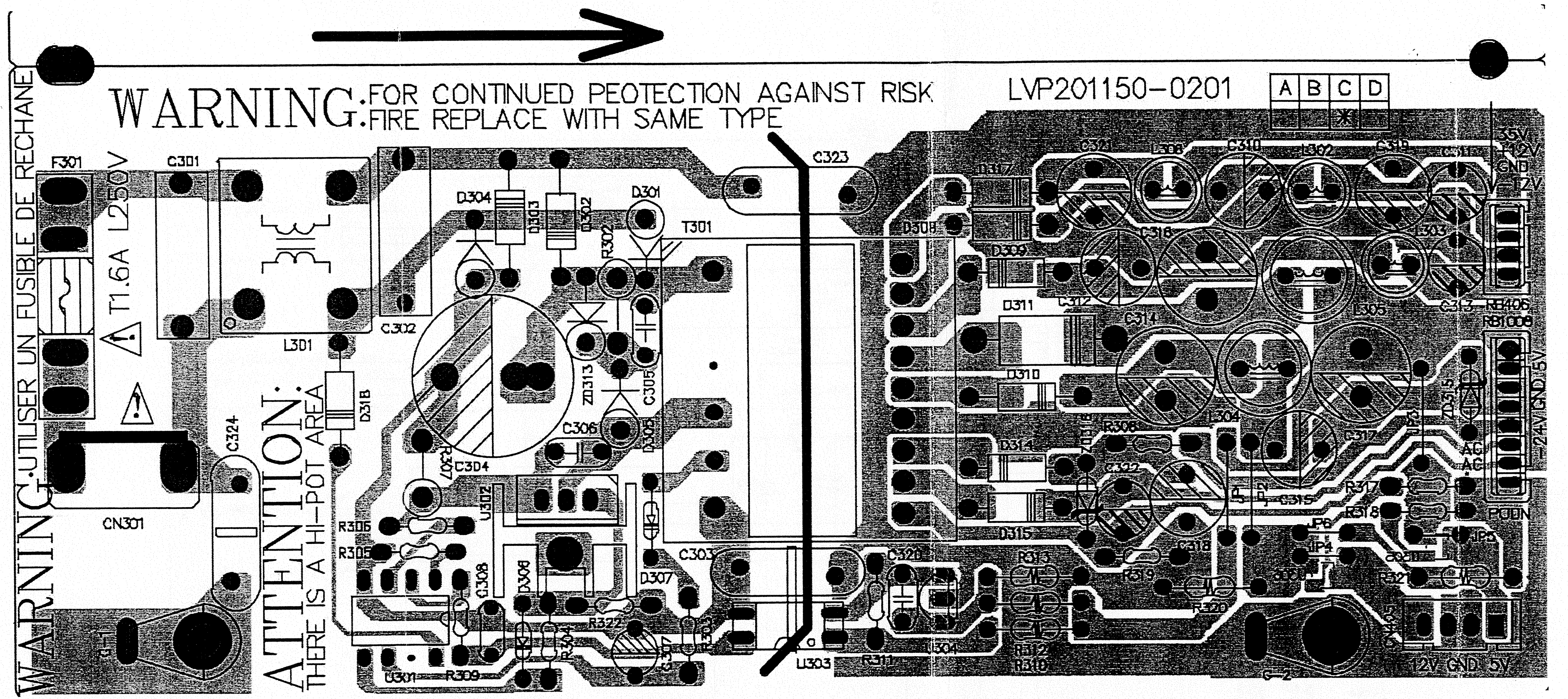
CHANGE:

1.ADD Y CAP C323,C324

2.DELETE Y CAP C309

3.ADD DIODE D311

POWER PCB LAYOUT


WARNING: FOR CONTINUED PEOTECTION AGAINST RISK
FIRE REPLACE WITH SAME TYPE
LVP201150-0201
A B C D
WARNING: UTILISER UN FUSIBLE DE RECHANE
T1.6A L250V
ATTENTION:
THERE IS A HI-POT AREA
F301
C301
L301
C302
C324
CN301
D318
D304
D303
D302
D301
R302
T301
ZD313
C305
C306
C304
R307
U302
R306
R305
C308
D306
D305
D307
C303
R322
R304
C307
R303
U301
R309
U303
C323
C320
R313
R312
R310
R311
U304
D317
D308
D309
D311
D310
D314
D315
C321
L308
C310
L302
C319
C311
C318
C309
C312
C314
L305
C313
L304
C317
C322
C316
C315
R308
R317
R318
R319
R320
R321
JP5
JP6
JP4
ZD315
RB406
RB1008
35V
+12V
GND
-12V
-24V
GND
5V
AC
AC
PODN
12V
GND
5V

ELECTRICAL PARTS LIST POWER BOARD

MISCELLANEOUS

CN405	CCN250000-0104	CONNECTOR B4B-XH-A 4 PIN
CN301	CCN396021-0104	CONNECTOR 4 PIN P=3.96mm
	CFC011000-1001	FUSE CLIP DIA5xL20mm FUSE
	DCR030001-0001	FUSE COVER ID19.6xW11xH5.5mm UL
	DHU201001-0001	WASHER OD6xID3xH2.5mm 602S-V0
	DSL001001-0100	SLEEVING OD3xID2.5xL10mm
	DSL001002-0150	SLEEVING OD2xID1xL15mm
	DTB005000-0250	TUBING SRK DIA=5 L=25mm BLACK
	GAL100139-0001	HEAT SINK AL H=28mm
	GCU000014-0002	COPPDR SHEET W/PLATE SN
	HIM000001-0001	MICA SHEET 13x18xT0.1mm
FOR U302	HSP140054-1080	SCREW T3.0xL8xP1.06mm,0.47g
L301	JFT006002-0040	AC FILTER 25mH D0.25x120TURNS
F301	KSA020160-0120	FUSE T1.6A L250V SLOW 5x20mm

CAPACITORS

C317	PME599530-1020	COND ELECT 1000uF 10V 20% 105C
C314	PME599540-1020	COND ELECT 1000uF 16V 20% 105C
C308	PRD235470-1020	COND DISC 1000 pF 50V 10%
C320	PRD235470-1040	COND DISC 0.1 uF 50V 10%
C305	PRD2355Q0-1030	COND DISC 0.01uF1KV 20% (FORMING&TAPPING
C306	PRD5394Q0-1010	COND DISC 100pF +/-10% 1KV Y5P
C322	PRE039540-1010	COND ELECT 100 uF 16 V 20%
C315	PRE039540-4710	COND ELECT 470 uF 16 V 20%
C311	PRE039550-1010	COND ELECT 100 uF 25 V 20%
C313	PRE039550-1010	COND ELECT 100 uF 25 V 20%
C310	PRE039550-2210	COND ELECT 220uF 25V 20%
C312	PRE039550-2210	COND ELECT 220uF 25V 20%
C321	PRE039570-1010	COND ELECT 100uF 50V 20%
C318	PRE039570-1010	COND ELECT 100uF 50V 20%
C319	PRE039570-4700	COND ELECT 47uF 50V 20%
C307	PRE599540-1000	ELECT 10uf 16V 20% 105
C316	PVE599530-2220	COND ELECT 2200uF 10V 20%
C304	PVE5995K2-4700	COND ELECT 47uF 400V 20% 105 10X16MM
C301	PVX2705F0-1042	COND SAFTY 0.1 uF 250V 20%CAMEL
C302	PVX2705F0-1042	COND SAFTY 0.1 uF 250V 20%CAMEL
C303	PVY1705F2-2220	COND SAFTY 0.0022uF 250V 20% JYA-NAY
C323	PVY1705F2-2220	COND SAFTY 0.0022uF 250V 20% JYA-NAY
C324	PVY1705F2-2220	COND SAFTY 0.0022uF 250V 20% JYA-NAY

RESISTORS

R308	QAF025000-1010	RESISTOR 100 OHM 1/2 W 5% CF
R307	QAF025000-1090	RESISTOR 1 OHM 1/2 W 5% CF
P1 P2	QAF025000-2050	RESISTOR 2M OHM 1/2 W 5% CF
R310	QAF045000-1010	RESISTOR 100 OHM 1/4 W 5% CF
R320	QAF045000-1030	RESISTOR 10K OHM 1/4 W 5% CF
R319	QAF065000-1030	RESISTOR 10K OHM 1/6 W 5% CF
R322	QAF065000-1030	RESISTOR 10K OHM 1/6 W 5% CF
R317	QAF065000-1040	RESISTOR 100K OHM 1/6 W 5% CF
R318	QAF065000-1040	RESISTOR 100K OHM 1/6 W 5% CF
R321	QAF065000-1040	RESISTOR 100K OHM 1/6 W 5% CF
R309	QAF065000-1090	RESISTOR 1 OHM 1/6 W 5% CF
R306	QAF065000-1520	RESISTOR 1.5K OHM 1/6 W 5% CF
R303	QAF065000-2210	RESISTOR 220 OHM 1/6 W 5% CF
R304	QAF065000-3010	RESISTOR 300 OHM 1/6 W 5% CF
R311	QAF065000-4720	RESISTOR 4.7K OHM 1/6 W 5% CF
R305	QAF065000-4720	RESISTOR 4.7K OHM 1/6 W 5% CF
R313	QAM041000-1002	RESISTOR 10K OHM 1/4 W 1% MF
R312	QAM041000-1002	RESISTOR 10K OHM 1/4 W 1% MF
R302	QDN305000-4730	RESISTOR 47KOHM 3W 5% METAL FILM FIXED

DIODE

D308	RAD100104-0010	DIODE HER104 1A 300V 50nS
D309	RAD100104-0010	DIODE HER104 1A 300V 50nS
D314	RAD100104-0010	DIODE HER104 1A 300V 50nS
D315	RAD100104-0010	DIODE HER104 1A 300V 50nS
D317	RAD100104-0010	DIODE HER104 1A 300V 50nS
D305	RAD100107-0010	DIODE FR107 1A 1000V
D310	RAD100204-0010	DIODE HER204 2A 300V 50nS
D302	RAD114007-0010	DIODE 1N4007
D303	RAD114007-0010	DIODE 1N4007
D318	RAD114007-0010	DIODE 1N4007
D301	RAD114007-0010	DIODE 1N4007
D304	RAD114007-0010	DIODE 1N4007
D306	RAD114148-0010	DIODE SW 1N4148
D307	RAD114148-0010	DIODE SW 1N4148
FOR D311	RAD115822-0010	DIODE RECT 1N5822 3A 45V
ZD313	RAD160200-0010	DIODE P6KE200A
ZD316	RAZ005005-0030	DIODE ZENR 5.0-5.2V 0.5W
ZD315	RAZ005024-0020	DIODE ZENR 23.6-24.7V 0.5W

TRANSISTOR

U305	RCM003403-2002	FET AO34P03 SOT236 ALPHA -30V/-2.6A
U306	RCM003403-2002	FET AO34P03 SOT236 ALPHA -30V/-2.6A
U304	RHI004310-0001	IC 3 PIN TL431
U301	RHI120060-0001	IC 8PIN NCP 1200P60 PDIP ONS
U302	RHM020060-1001	MOS/FET STP2NC60 1.9A 600V 7 OHM T0220
U303	RHO615003-3001	OPT SENSOR SFH615A-3

COIL

L302	SIL001001-0010	SPR COIL 20uH/0.5A Q>30 DCR55
L303	SIL001001-0010	SPR COIL 20uH/0.5A Q>30 DCR55
L306	SIL001001-0010	SPR COIL 20uH/0.5A Q>30 DCR55
L304	SIL106002-6090	INDUCTOR 6uH 13.5Ts 2UEW
L305	SIN003700-1000	INDUCTOR 10 uH 20% D0.7x18.5Ts

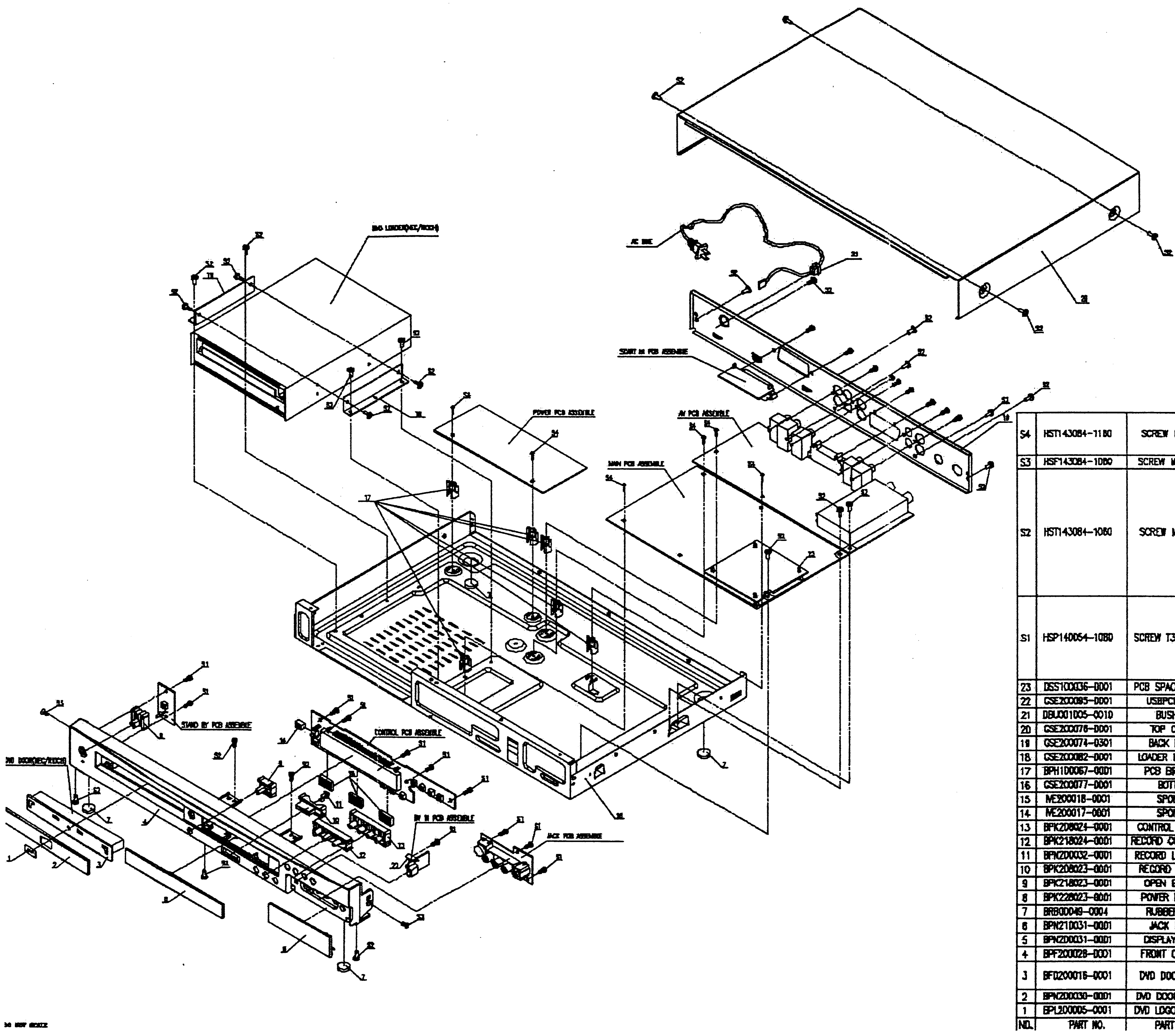
TRANSFORMER

T301	TSA212001-0130	SW. TRANSFORMER EI-28

WIRE

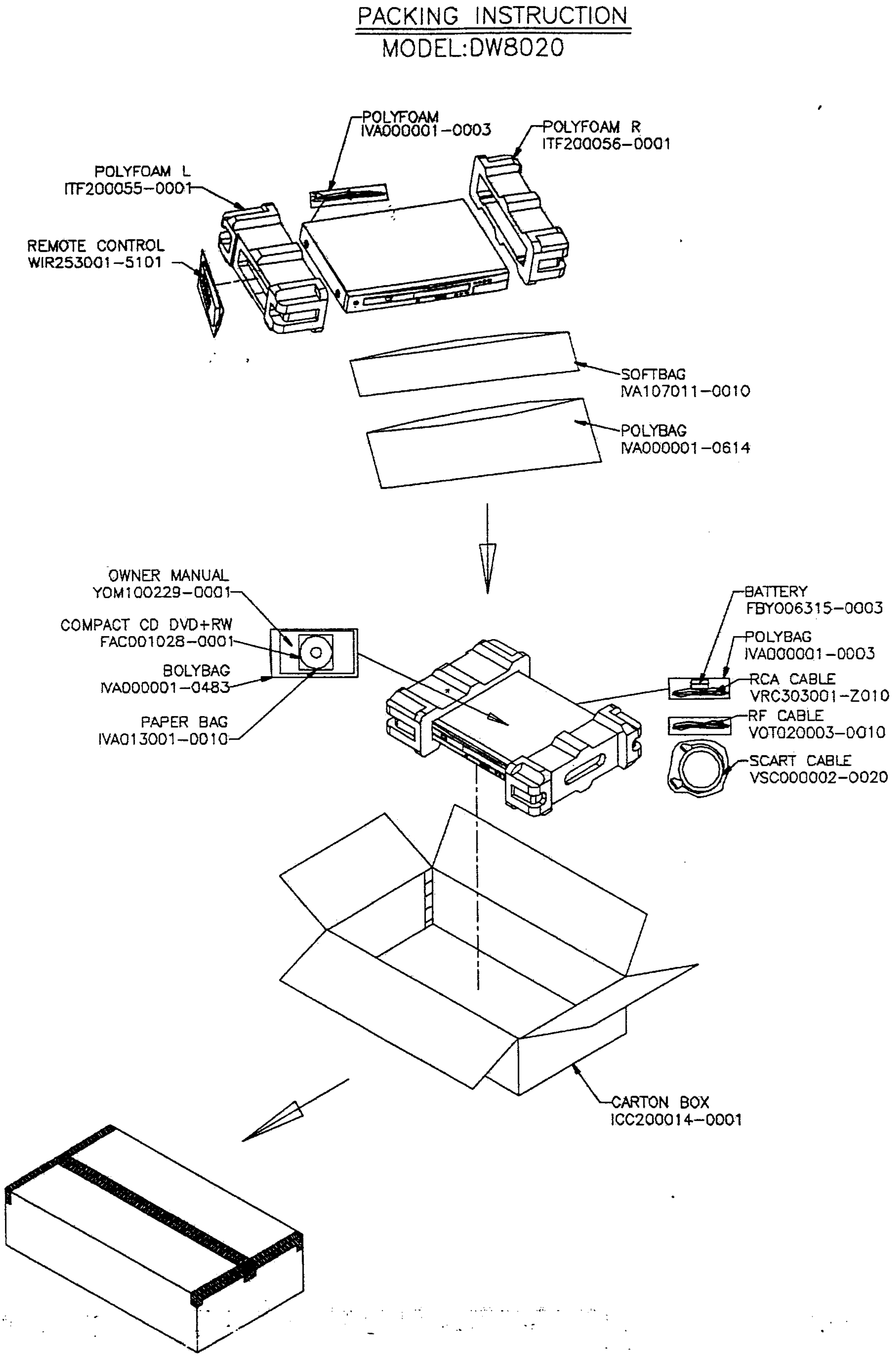
RB406	VFL401245-0500	CON/WIRE 4P 50mm 2468#26 RAINBOW
RB1008	VFL801245-1400	CON/WIRE 8PIN 140mm 2468#26 RAINBOW
JP1	XJP220000-0001	WIRE BARE 22 GA TINNED
JP2	XJP220000-0001	WIRE BARE 22 GA TINNED
JP3	XJP220000-0001	WIRE BARE 22 GA TINNED

MAIN UNIT EXPLODE


DVD LOADER(NEC/RICOH)
AC LINE
SCART IN PCB ASSEMBLE
POWER PCB ASSEMBLE
AV PCB ASSEMBLE
MAIN PCB ASSEMBLE
STAND BY PCB ASSEMBLE
CONTROL PCB ASSEMBLE
DVD DOOR(NEC/RICOH)
DV IN PCB ASSEMBLE
JACK PCB ASSEMBLE

S4	HST143084-1180	SCREW M3X16X0.5P	POWER PCB TO BOTTOM--2 JACK PCB(BACK) TO BOTTOM--2 MAIN PCB TO BOTTOM--2	6	
S3	HSF143084-1080	SCREW M3X6X0.5P	FRONT CABINET SIDE TO BOTTOM	2	
S2	HST143084-1080	SCREW M3X6X0.5P	TOP COVER TO BOTTOM--4 TOP COVER TO BACK PLATE--3 TOP COVER TO BACK PLATE TO BOTTOM--2 BACK PLATE TO BOTTOM--2 LOADER BKT TO DVD LOADER--4 LOADER BKT TO BOTTOM--4 JACK PCB(BACK) TO BOTTOM--1 MAIN PCB TO BOTTOM--2 BOTTOM TO FRONT CABINET--5	27	
S1	HSP140054-1080	SCREW T3.0XL8.0XP1.06	SCART IN TO BACK PLATE--2 JACK PCB(BACK) TO BACK PLATE--7 JACK PCB(FRONT) TO FRONT CABINET--3 USB BRACKET TO FRONT CABINET--1 CONTROL PCB TO FRONT CABINET--5 STAND BY PCB TO FRONT CABINET--2	20	
23	DSS100036-0001	PCB SPACER SUPPORT	pinggood lcss-15	4	
22	GSE200085-0001	USBPCB BRK	SECC T=1MM	1	
21	DBU001005-0010	BUSHING	PIN GOOD SRF-5A	1	
20	GSE200076-0001	TOP COVER	SECC T=0.6MM	1	
19	GSE200074-0301	BACK PLATE	SECC T=0.6MM	1	
18	GSE200082-0001	LOADER BRACKET	SECC T=1MM	2	
17	BPH100067-0001	PCB BRACKET	H=8.5	6	
16	GSE200077-0001	BOTTOM	SECC T=0.6MM	1	
15	ME200018-0001	SPONGE	EVA (T4XL15XW10)	3	FOR VFD
14	ME200017-0001	SPONGE	EVA (T6.5XL8XW8)	1	FOR REMOTE
13	BPK208024-0001	CONTROL BUTTON	ABS	1	
12	BPK218024-0001	RECORD CONTROL BUTTON	ABS	1	
11	BPN200032-0001	RECORD LED LENS	PMMA(CLEAR)	1	
10	BPK208023-0001	RECORD BUTTON	ABS	1	
9	BPK218023-0001	OPEN BUTTON	ABS	1	
8	BPK228023-0001	POWER BUTTON	ABS	1	
7	BRB00049-0004	RUBBER FOOT	RUBBER DIA14XT3MM	4	
6	BPN210031-0001	JACK DOOR	ABS	1	
5	BPN200031-0001	DISPLAY LENS	PMMA(CLEAR)	1	
4	BPF200028-0001	FRONT CABINET	HIPS	1	
3	BFD200016-0001	DVD DOOR(NEC)	ABS	1	
2	BPN200030-0001	DVD DOOR LENS	PMMA(CLEAR)	1	
1	BPL200005-0001	DVD LOGO PLATE		1	
NO.	PART NO.	PART NAME	DESCRPTION	QTY	REMARK

PACKING EXPLODE


PACKING INSTRUCTION
MODEL:DW8020
POLYFOAM
IVA000001-0003
POLYFOAM R
ITF200056-0001
POLYFOAM L
ITF200055-0001
REMOTE CONTROL
WIR253001-5101
SOFTBAG
IVA107011-0010
POLYBAG
IVA000001-0614
OWNER MANUAL
YOM100229-0001
COMPACT CD DVD+RW
FAC001028-0001
BOLYBAG
IVA000001-0483
PAPER BAG
IVA013001-0010
BATTERY
FBY006315-0003
POLYBAG
IVA000001-0003
RCA CABLE
VRC303001-Z010
RF CABLE
VOT020003-0010
SCART CABLE
VSC000002-0020
CARTON BOX
ICC200014-0001